Appendix A

Assembly Bill No. 2193

An act to amend Section 64 of the Harbors and Navigation Code, relating to water.

[Approved by Governor September 21, 1996.
Filed with Secretary of State September 23, 1996.]

Legislative Counsel's Digest

AB 2193, Rainey. Sacramento-San Joaquin Delta: *Egeria densa*.

(1) Existing law designates the Department of Boating and Waterways as the lead agency in cooperating with other agencies in controlling water hyacinth in the Sacramento-San Joaquin Delta, its tributaries, and the Suisun Marsh.

This bill also would designate the department as the lead agency in cooperating with other agencies in controlling *Egeria densa* in those areas. The bill would provide that up to $5,000 per year of the funds available for expenditure by the Department of Fish and Game to implement the bill shall be paid from the Harbors and Watercraft Revolving Fund.

The bill would require the department and the Contra Costa Water District to develop a memorandum of understanding establishing the parameters for any control program proposed to take place in Rock Slough. The bill, thereby, would impose a state-mandated local program.

The bill would provide that it does not apply to any control program proposed for Sand Mound Slough.

(2) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specific reason.

The people of the State of California do enact as follows:

Section 1. Section 64 of the Harbors and Navigation Code is amended to read:

64. (a) The Legislature hereby finds and declares that the growth of water hyacinth and *Egeria densa* in the Sacramento-San Joaquin Delta, its tributaries, and the Suisun Marsh has occurred at an unprecedented level and that the resulting accumulations of water hyacinth and *Egeria densa* obstruct navigation, impair other recreational uses of waterways, have the potential for damaging manmade facilities, and may threaten the health and stability of fisheries and other ecosystems within the delta and marsh. Accordingly, it is necessary that the state, in cooperation with agencies of the United States, undertake an aggressive program for the effective control of water hyacinth and *Egeria densa* in the delta, its tributaries, and the marsh.

(b) The department is designated as the lead agency of the state for the purpose of cooperating with agencies of the United States and other public agencies in controlling water hyacinth and *Egeria densa* in the delta, its tributaries, and the marsh.

(c) The department, other state agencies, cities, counties, and districts are hereby authorized to cooperate with one another and with agencies of the United States in controlling water hyacinth and *Egeria densa* in the delta, its tributaries, and the marsh and may furnish money, services, equipment, and other property to that end.

(d) Up to five thousand dollars ($5,000) per year of the funds available for expenditure by the Department of Fish and Game to implement this section shall be paid from the Harbors and Watercraft Revolving Fund.

(e) Whenever any control program is proposed to take place in Rock Slough, the department and the Contra Costa Water District shall develop a memorandum of understanding establishing the parameters of the control program. This subdivision does not apply to any control program proposed for Sand Mound Slough.

Sec. 2. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district are the result of a program for which legislative authority was requested by that local agency or school district, within the meaning of Section 17556 of the Government Code and Section 6 of Article XIII B of the California Constitution.

Notwithstanding Section 17580 of the Government Code, unless otherwise specified, the provisions of this act shall become operative on the same date that the act takes effect pursuant to the California Constitution.

Appendix B

Legal Definition of Sacramento-San Joaquin Delta

WATER CODE SECTION 12220

The Sacramento-San Joaquin Delta shall include all the lands within the area bounded as follows:

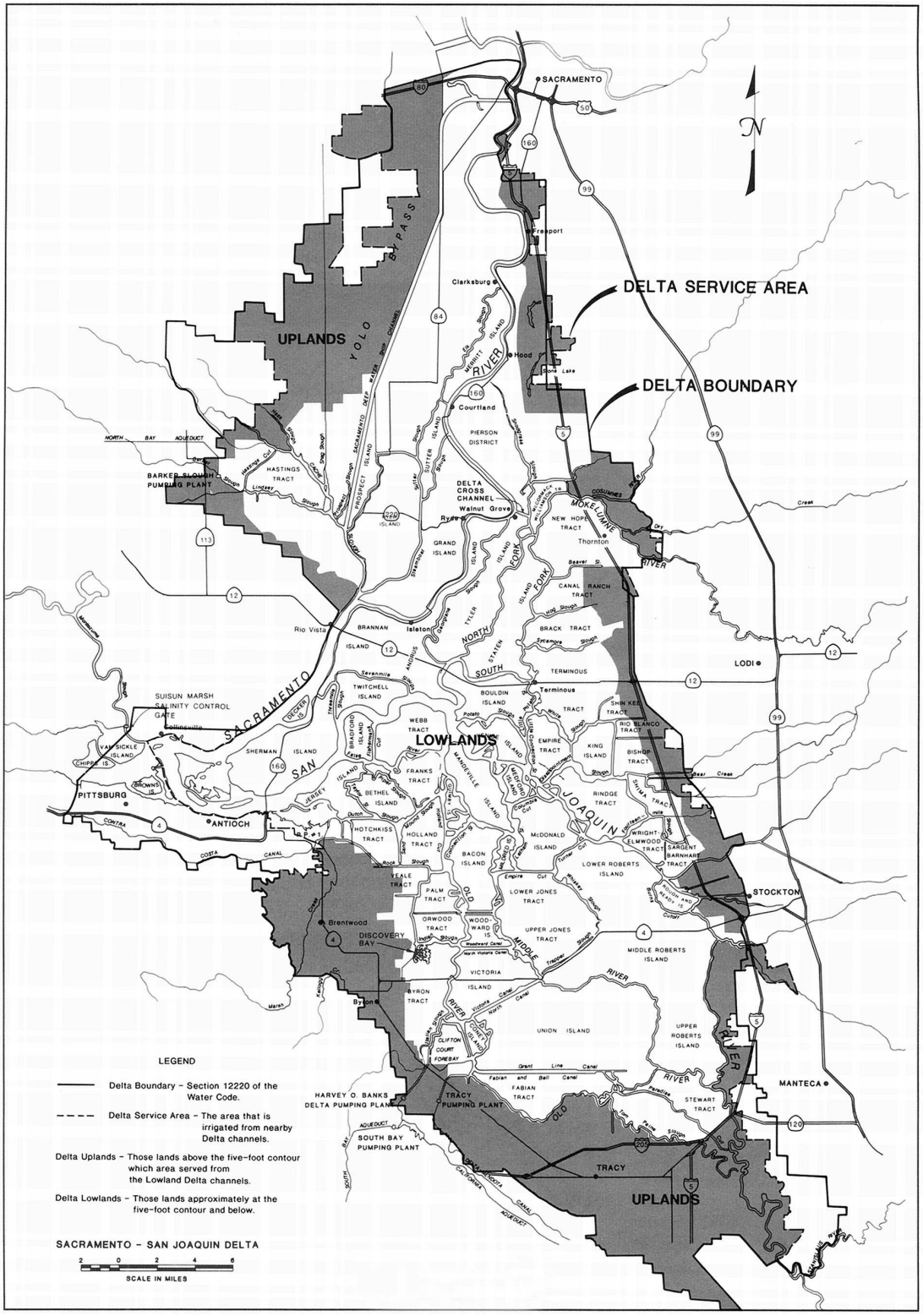
Beginning at the Sacramento River at the I Street bridge proceeding westerly along the Southern Pacific Railroad to its intersection with the west levee of the Yolo By-pass; southerly along the west levee to an intersection with Putah Creek, then westerly along the left bank of Putah Creek to an intersection with the north-south section line dividing sections 29 and 28, T8N, R6E; south along this section line to the northeast corner of section 5, T7N, R3E; west to the northwest corner of said section; south along west boundary of said section to intersection of Reclamation District No. 2068 boundary at northeast corner of SE 1/4 of section 7, T7N, R3E; southwesterly along Reclamation District No. 2068 boundary to southeast corner of SW 1/4 of section 8, T6N, R2E; west to intersection of Maine Prairie Water Association boundary at southeast corner of SW 1/4 of section 7, T6N, R2E; along the Maine Prairie Water Association boundary around the northern and western sides to an intersection with the southeast corner of section 6, T5N, R2E; west to the southwest corner of the SE 1/4 of said section; south to the southwest corner of the NE 1/4 of section 7, T5N, R2E; east to the southeast corner of the NE 1/4 of said section; south to the southeast corner of said section; west to the northeast corner of section 13, T5N, R1E; south to the southeast corner of said section; west to the northwest corner of the NE 1/4 of section 23, T5N, R1E; south to the southwest corner of the NE 1/4 of said section; west to the northwest corner of the SW 1/4 of said section; south to the southwest corner of the NW 1/4 of section 26, T5N, R1E; east to the northeast corner of the SE 1/4 of section 25, T5N, R1E; south to the southeast corner of said section; east to the northeast corner of section 31, T5N, R2E; south to the southeast corner of the NE 1/4 of said section; east to the northeast corner of the SE 1/4 of section 32, T5N, R2E; south to the northwest corner of section 4, T4N, R2E; east to the northeast corner of said section; south to the southwest corner of the NW 1/4 of section 3, T4N, R2E; east to the northeast corner of the SE1/4 of said section; south to the southwest corner of the NW 1/4 of the NW 1/4 of section 11, T4N, R2E; east to the southeast corner of the NE 1/4 of the NE 1/4 of said section; south along the east line of section 11, T4N, R2E to a road intersection approximately 1000 feet south of the southeast corner of said section; southeasterly along an unnamed road to its intersection with the right bank of the Sacramento River about 0.7 mile upstream from the Rio Vista bridge; southwesterly along the right bank of the Sacramento River to the northern boundary of section 28, T3N, R2E; westerly along the northern boundary of sections 28, 29, and 30, T3N, R2E and sections 25 and extended 26, T3N, R1E to the northwest corner of extended section 26, T3N, R1E; northerly along the west boundary of section 23, T3N, R1E to the northwest corner of said section; westerly along the northern boundary of sections 22 and 21, T3N, R1E to the Sacramento Northern Railroad; southerly along

the Sacramento Northern Railroad; southerly along the Sacramento Northern Railroad to the ferry slip on Chipps Island; across the Sacramento River to the Mallard Slough pumping plant intake channel of the California Water Service Company; southward along the west bank of the intake channel and along an unnamed creek flowing from Lawler Ravine to the southern boundary of the Contra Costa County Water District; easterly along the southern boundary of the Contra Costa County Water District to the East Contra Costa Irrigation District boundary; southeasterly along the southwestern boundaries of the East Contra Costa Irrigation District, Byron-Bethany Irrigation District, West Side Irrigation District and Banta-Carbona Irrigation District to the northeast corner of the NW 1/4 of section 9, T3S, R6E; east along Linne Road to Kasson Road; southeasterly along Kasson Road to Durham Ferry Road; easterly along Durham Ferry Road to its intersection with the right bank of the San Joaquin River at Reclamation District No. 2064; southeasterly along Reclamation District No. 2064 boundary, around its eastern side to Reclamation District No. 2075 and along the eastern and northern sides of Reclamation District No. 2075 to its intersection with the Durham Ferry Road; north along the Durham Ferry Road to its intersection with Reclamation District No. 17; along the eastern side of Reclamation District No. 17 to French Camp Slough; northerly along French Camp Turnpike to Center Street; north along Center Street to Weber Avenue; east along Weber Avenue to El Dorado Street; north along El Dorado Street to Harding Way; west along Harding Way to Pacific Avenue; north along Pacific Avenue to the Calaveras River; easterly along the left bank of the Calaveras River to a point approximately 1,600 feet west of the intersection of the Western Pacific Railroad and the left bank of said river; across the Calaveras River and then north 18* 26' 36 west a distance of approximately 2,870 feet; south 72* 50' west a distance of approximately 4,500 feet to Pacific Avenue (Thornton Road); north along Pacific Avenue continuing onto Thornton Road to its intersection with the boundary line dividing Woodbridge Irrigation District and Reclamation District No. 348; east along this boundary line to its intersection with the Mokelumne River; continuing easterly along the right bank of the Mokelumne River to an intersection with the range line dividing R5E and R6E; north along this range line to the Sacramento-San Joaquin County line; west along the county line to an intersection with Reclamation District No. 1609; northerly along the eastern boundary of Reclamation District No. 1609 to the Cosumnes River, upstream along the right bank of the Cosumnes River to an intersection with the eastern boundary of extended section 23, T5N, R5E; north along the eastern boundary of said extended section to the southeast corner of the NE 1/4 of the NE 1/4 of said extended section; west to the southeast corner of the NE 1/4 of the NW 1/4 of extended section 14, T5N, R5E; west to an intersection with Desmond Road; north along Desmond Road to Wilder-Ferguson Road; west along Wilder-Ferguson Road to the Western Pacific Railroad; north along the Western Pacific Railroad to the boundary of the Elk Grove Irrigation District on the southerly boundary of the N 1/2 of section 4, T5N, R5E; northerly along the western boundary of the Elk Grove Irrigation District to Florin Road; west on Florin Road to the eastern boundary of Reclamation District No. 673; northerly around Reclamation District No. 673 to an intersection with the Sacramento River and then north along the left bank of the Sacramento River to I Street bridge.

Section, range, and township locations are referenced to the Mount Diablo Base Line and Meridian. Road names and locations are as shown on the following United States Geological Survey Quadrangles, 7.5 minute series: Rio Vista, 1953; Clayton, 1953; Vernalis, 1952; Ripon, 1952; Bruceville, 1953; Florin, 1953; and Stockton West, 1952.

Appendix C

The Legal Delta



Source: Sacramento Delta San Joaquin Atlas, California Department of Water Resources, 1993.

Appendix D

Rivers Entering the Delta

The Delta receives runoff from over 40 percent of the State's land area including flows from the following 19 rivers:

1. American
2. Bear
3. Butte
4. Cache
5. Calaveras
6. Chowchilla
7. Cosumnes
8. Feather
9. Fresno
10. Kings
11. McCloud
12. Merced
13. Mokelumne
14. Putah
15. Sacramento
16. San Joaquin
17. Stanislaus
18. Tuolumne
19. Yuba.

Appendix E

Counties within the Delta

Portions of the following six counties make up the Delta:

1. Alameda County
2. Contra Costa County
3. Sacramento County
4. San Joaquin County
5. Solano County
6. Yolo County.

Appendix F

Water Districts and Agencies within the Delta

Within the Delta region, there are a total of six water districts and agencies:

1. Central Delta Water Agency
2. North Delta Water Agency
3. South Delta Water Agency
4. Contra Costa Water Agency
5. East Contra Costa Irrigation District
6. Byron-Bethany Irrigation District.

Appendix G

Method for Prioritizing Sites to Treat

Project Area Survey

The DBW would rely on annual *Egeria* aerial surveys and site inspections by qualified staff to determine the extent of *Egeria* infestation. The project area survey process is outlined below:

- A contracted aerial photographic service would perform annual aerial surveys of the project area.
- Qualified staff would conduct field surveys to corroborate (ground truth) information provided by the aerial photographic survey. Through ground truthing, DBW staff would identify areas of *Egeria* infestation.
- The DBW, or contracted specialists, would map data from the annual aerial survey. From these maps, the DBW would estimate the surface area acreage of *Egeria* infestation. These maps, prepared annually, would track changes in the extent of *Egeria* infestation from year to year.

DBW field crews also would conduct informal, small-scale visual surveys on an ongoing basis during *Egeria* field reconnaissance work and while conducting the water hyacinth control program.

Primary Site Evaluation

In the primary site evaluation, the DBW would 1) determine the degree of navigational impairment caused by *Egeria*, 2) assess the significance that the infestation poses, and 3) identify if the site is suitable for currently available *Egeria* treatment methods. The DBW would rank sites based on the present need to implement *Egeria* control measures.

Degree of Navigational Impairment

The DBW would assess the degree of navigational impairment based on both the estimated surface area coverage and biomass (i.e., weight/volume, or density) of *Egeria* infestation. Annual aerial surveys likely will provide only estimates of *Egeria* surface area coverage, not necessarily *Egeria* biomass estimates. The DBW would employ services of qualified specialists to determine an appropriate protocol for estimating *Egeria* biomass prior to treatment.

Pre-treatment surface area and biomass estimates may be compared to post-treatment estimates to determine the efficacy of the control treatment. The

DBW would estimate *Egeria* biomass when feasible during a primary site evaluation, but likely would not be able to estimate biomass for all potential treatment sites due to resource limitations.

Significance of Navigational Impairment

Significant sites are those for which *Egeria* infestation causes impairment to high intensity navigation and/or recreational activities. Consequently, a highly traveled site would rank higher than a less-traveled site. In the future, the DBW may redefine a high priority site to include certain nursery areas. Though not critical to navigation themselves, these nursery areas provide a habitat for *Egeria* to grow and eventually spread into navigable areas.

This framework indicates how the DBW would weigh the degree, or extent, of the impairment with the significance of impairment. A site with a medium degree of navigational impairment and a high significance level would be treated before a site with a high degree of navigational impairment and a medium significance level. An area may have a high degree of navigational impairment, however if it were not highly traveled it would not be identified as a high priority site.

First Year Primary Site Evaluation

Exhibit G-1, on the following page, shows the first year primary site evaluation that the DBW used to rank potential treatment sites relative to other sites in the project area. The DBW rated the degree of navigational impairment as low, medium, or high. The DBW also rated the significance of navigational impairment as low, medium, or high. Finally, the DBW assessed whether the site is suited for currently available control methods (i.e., either yes or no). The highest ranked sites were those with a high degree of navigational impairment, a highly significant impairment, and conditions suitable for current *Egeria* treatment methods.

The DBW ranked sites using the parameters from primary site evaluation matrix with the following weightings:

- Degree of Navigational Impairment
  (High = 3, Medium = 2, and Low = 1)
- Significance of Navigational Impairment
  (High = 3, Medium = 2, and Low = 1)
- Suitability for Available EDCP Methods
  (Yes =2 and No = 1)

The primary site evaluation revealed that a total of 35 of the 70 sites are high priority and the remaining 35 are currently low priority.

EXHIBIT G-1

Primary Site Evaluation for Proposed Treatment Sites

(As of December 1999)

No.	Water Body	*Egeria* Growth Estimates			
		Degree of Navigational Impairment (H=3, M=2, l=1)	Significance of Navigational Impairment (H=3, M=2, l=1)	Suitibility for EDCP Methods (Y=2, N=1)	Total Score
	High Priority				
1	Franks Tract	3	3	2	8
2	Venice Cut	2	3	2	7
3	Big Break I	3	2	2	7
4	Sherman lake	3	2	2	7
5	Rock Slough	3	2	2	7
6	White Slough	3	2	2	7
7	Fisherman's Cut	3	2	2	7
8	Taylor Slough	2	2	2	6
9	Sandmound	2	2	2	6
10	Pipers Slough	2	2	2	6
11	Latham Slough	2	2	2	6
12	Disappointment Slough	2	2	2	6
13	Old River Del's	2	2	2	6
14	Old River Connection	2	2	2	6
15	Middle River Bullfrog	2	2	2	6
16	Middle River Jones	2	2	2	6
17	14 Mile Slough	2	2	2	6
18	Middle River Victoria	2	2	2	6
19	Donlon Island	3	1	2	6
20	Rhode Island	3	1	2	6
21	Big Break Wetlands	3	1	2	6
22	Big Break II	3	1	2	6
23	Seven Mile Slough	3	1	2	5
24	Dutch Slough	1	2	2	5
25	Little Potato Slough	1	2	2	5
26	Turner Empire Cut	1	2	2	5
27	Little Venice Island	1	2	2	5
28	Coney Island	2	1	2	5
29	Hog Island	1	2	2	5
30	Village West Pixley	2	1	2	5
31	Bacon Island	2	1	2	5
32	Paradise Cut	2	1	2	5
33	Bishop Telephone Cut	2	1	2	5
34	Old River Orwood	2	1	2	5
35	Potato Slough	2	1	2	5
	Low Priority				
36	Beaver Slough	1	1	2	4
37	Sycamore Slough	1	1	2	4
38	Hog Slough	1	1	2	4
39	Ward Island	1	1	2	4
40	Wiskey Slough	1	1	2	4
41	Indian Slough	1	1	2	4
42	South Mokelumne	1	1	2	4
43	Old River Main	1	1	2	4
44	North Mokelume	1	1	2	4
45	3 Mile Slough	1	1	2	4
46	San Joaquin Bradford	1	1	2	4
47	Quimby Island	1	1	2	4
48	Hayes Reach	1	1	2	4
49	Middle River Mildred	1	1	2	4
50	Antioch	1	1	2	4
51	Topeka Santa Fe	1	1	2	4
52	Old River Holland	1	1	2	4
53	Werner Dredger Cut	1	1	2	4
54	Victoria Canal	1	1	2	4
55	Burns French Camp	1	1	2	4
56	Woodward Canal	1	1	2	4
57	Grant Line Canal	1	1	2	4
58	Trapper Slough	1	1	2	4
59	Lost Slough	1	1	2	4
60	Snodgrass Slough	1	1	2	4
61	Middle River Union	1	1	2	4
62	Depue Ox Bow	1	1	2	4
63	River Club Ox Bow	1	1	2	4
64	5 Mile Slough	1	1	2	4
65	San Joaquin Roberts	1	1	2	4
66	Stockton Channel	1	1	1	3
67	San Andreas Shoal	1	1	1	3
68	San Joaquin Mossdale	1	1	1	3
69	Tom Paine Slough	1	1	1	3
70	Circle Lake	1	1	1	3

Appendix H

Summary of *Egeria Densa* Trials

DBW developed information on potential *Egeria* control methods through research trials. These trials provided a scientific basis to identify and develop appropriate *Egeria* control methods that satisfied both EDCP objectives and the requirements of state and federal environmental regulatory agencies.

The DBW undertook the research trials in 1997 and 1998. The purpose of conducting the trials was to obtain information on efficacy and environmental impacts associated with proposed *Egeria* control methods.

Chemical Trials

Concurrent with ongoing mechanical trials, the DBW planned preliminary research trials to evaluate the aquatic herbicides Reward, Komeen, and Sonar as potential chemical control methods. The six chemical treatment sites that the DBW selected were Sandmound Slough, White Slough, Sevenmile Slough, Big Break Marina, Little Venice Island, and Frank's Tract. These sites were selected to provide the DBW an indication of the efficacy of particular chemicals under characteristic flow conditions found in the Delta.

In March 1998, the DBW applied for an Incidental Take Permit from the United States Fish and Wildlife Service (USFWS) to allow for a fish take that might occur as a result of the chemical trial applications. The USFWS issued a Biological Opinion for the chemical trials on May 29, 1998. Reasonable and prudent measures outlined in the Biological Opinion included minimization of the potential for impacts to delta smelt, delta smelt critical habitat, Sacramento splittail, and splittail habitat (USFWS 1998). Specific terms and conditions included avoiding or delaying chemical or mechanical treatment if Interagency Ecological Program (IEP) data revealed high abundances of delta smelt or Sacramento splittail in the area, and mitigation for habitat loss at a 3:1 ratio if analysis of aerial photography revealed that such loss had occurred due to the trial applications.

The DBW prepared a chemical application plan necessary for filing a Categorical Exemption with the Office of Planning and Research for chemical treatment trials. Objectives of chemical treatment research were to (1) assess environmental impacts that could result from control methods, (2) assess efficacy of control methods, and (3) obtain information to use for treatment

method selection. A Categorical Exemption for chemical test applications was filed on April 27, 1998. The DBW applied chemicals to the trial locations in June, July, and August of 1998.

Mechanical Trials

During June and July 1997, the DBW proposed three test plot harvests. The DBW identified potential disposal sites for harvested material and required regulatory approvals. The DBW also included information necessary to develop a mechanical harvesting protocol for *Egeria* and to assess potential environmental impacts of this treatment method.

The DBW selected test-plot harvest locations primarily based on the amount of *Egeria* present. Selected locations also exhibited flows representative of typical Delta water flows. In September 1997, the DBW filed a Categorical Exemption with the State Office of Planning and Research for three test-plot harvests located at Sandmound Slough, White Slough, and Sevenmile Slough. Each of these locations was harvested during the fall of 1997, spring of 1998, and summer of 1998.

Exhibit H-1, on the following page, summarizes the timing and treatment acreage of both chemical and mechanical trails. **Volume III** to this report summarizes the key findings from the research and provides the actual research reports.

EXHIBIT H-1

Summary of *Egeria Densa* Trials

Egeria densa Chemical Treatment Plan

1.	*Big Break Marina*			
	Sonar A.S. (8 acres)	6/11/98	Twice per week	7/20/98
	Sonar SRP (1.3 acres)	8/25/98		9/10/98
2.	*Franck's Tract*			
	Sonar A.S. (8.75 acres)	6/23/98		7/31/98
3.	*Sandmound Slough*			
	Diquat (5 acres)	6/5/98	7/24/98	
	Komeen (5 acres)		6/19/98	
	Komeen (3.44 acres)			8/5/99
4.	*Sevenmile Slough*			
	Diquat (3 acres)	6/3/98	7/22/98	
	Komeen (3.44 acres)		6/17/98	
	Komeen (3.44 acres)			8/5/99
5.	*Venice Cut*			
	Sonar SRP (10 acres)	6/18/98		7/27/98
6.	*White Slough*			
	Diquat (4.13 acres)	6/1/98		
	Komeen (4.13 acres)		6/15/98	
	Komeen (4.13 acres)			8/4/99

Egeria densa Mechnical Harvesting Plan

	Trial 1	Trial 2	Trial 3
1. *Sandmound Slough*	10/21/97-10/22/97	5/12/98	7/28/98
2. *Sevenmile Slough*	10/23/97	5/13/98	7/25/98
3. *White Slough*	10/28/97	5/14/98	7/30/98

Appendix I

Background of Herbicides

Chemical Registrations

Every herbicide sold or used in California must be registered by the United States Environmental Protection Agency (EPA) and by the California Department of Pesticide Regulation (DPR). Before the DPR will register a herbicide, DPR toxicologists, entomologists, biologists, plant physiologists, chemists, and physicians evaluate extensive herbicide test data. Pesticide manufacturers also must submit studies of toxicology, efficacy, phytotoxicity, environmental fate, product chemistry, and residue methodology as part of the regulatory approval process required of EPA and DPR.

Herbicide Ingredients

A herbicide formulation consists of an organic or inorganic active ingredient, an inert carrier, and perhaps an adjuvant. The active ingredient is the component of the herbicide that kills, or otherwise controls, the target weed. The inert carrier is a substance that by itself does not add materially to the effectiveness of the herbicide. The adjuvant is a substance added to the herbicide that improves the effectiveness of the herbicide (e.g., by allowing the herbicide to adhere to the surface of the target plant).

Types of Herbicides

Herbicides break down by photolysis (i.e., they are broken down by light), microbial degradation, or metabolism by plants and animals. Herbicides commonly are classified as either a contact or a systemic herbicide.

Contact herbicides act quickly and are generally lethal to all plant cells that they contact. Because of this rapid action, or other physiological reasons, they do not move extensively within the plant and are effective only where they contact plants. For this reason, they are generally more effective on annual (plants that complete their life cycle in a single year), herbaceous plants. Perennial (plants that persist from year to year) woody plants can be defoliated by contact herbicides but they quickly resprout from unaffected plant parts. Submersed aquatic plants that are in contact with sufficient concentrations of the herbicide in the water for long enough periods of time are affected but

regrowth occurs from unaffected plant parts, especially plant parts that are protected beneath the hydrosoil. Because the entire plant is not killed by contact herbicides, retreatment is necessary, sometimes two or three times per year…. (Langeland, 1998)

Systemic herbicides (systemics) are absorbed into the living portion of the plant and move within the plant. Different systemic herbicides are absorbed to varying degrees by different plant parts…. When applied correctly, systemic herbicides act slowly in comparison to contact herbicides. They must move to the part of the plant where their site of action is. Systemic herbicides are generally more effective for controlling perennial and woody plants than contact herbicides. Systemic herbicides generally have more selectivity than contact herbicides (Langeland, 1998).

Herbicides used by the DBW for treatment of *Egeria* are aquatic herbicides. Most aquatic herbicides are non-persistent in water, or they degrade rapidly. Aquatic herbicides are water-soluble and they quickly dilute to non-detectable concentrations.

Means of Implementing Chemical Control Methods

Aquatic herbicides are either in liquid or granular forms. Liquid aquatic herbicides usually are applied by boat using a hose dragged below the water surface over the entire target area, or are sprayed onto the water surface. Granular aquatic herbicides are normally applied over the treatment area with a bow-mounted broadcast spreader. Aquatic herbicides also can be applied from a helicopter, an airplane, or sprayed from a truck.

Appendix J

Reward Label and Material Safety Data Sheet

Appendix J includes the label and material safety data sheets for Reward. **Exhibit J-1** is the current Reward label provided by the manufacturer Zeneca. The label includes directions for use, use restrictions, and storage and disposal requirements. **Exhibit J-2** is the Registration for Special Local Need in California for Reward. This registration is for control of *Egeria* and other submerged weeds. This registration specifies a target concentration of Reward not to exceed 0.37 ppm. **Exhibit J-3** is the material safety data sheet for Reward.

EXHIBIT J-1
Page 1 of 5

ZENECA Professional Products

REWARD®

Landscape and Aquatic Herbicide

This is a specimen label and may be inaccurate or out of date. It is intended as a guide in providing general information regarding use of this product. Always read and follow the EPA approved label on the product container.

EXHIBIT J-1
Page 2 of 5

ZENECA Professional Products

REWARD®

Landscape and Aquatic Herbicide

TO PREVENT ACCIDENTAL POISONING, NEVER PUT INTO FOOD, DRINK, OR OTHER CONTAINERS AND USE STRICTLY IN ACCORDANCE WITH ENTIRE LABEL.

DO NOT USE THIS PRODUCT FOR REFORMULATION.

ACTIVE INGREDIENT	
Diquat dibromide [6,7-dihydrodipyrido (1,2-a:2',1'-c) pyrazinediium dibromide]	36.4%
INERT INGREDIENTS	63.6%
TOTAL	100.0%

Contains 2 pounds diquat cation per gallon as 3.73 pounds salt per gallon.

EPA Reg. No. 10182-404

KEEP OUT OF REACH OF CHILDREN
WARNING—AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: IMMEDIATELY give water or milk to drink and induce vomiting by inserting finger in throat. Do not induce vomiting or give anything by mouth to an unconscious person. Take person and product container to the nearest hospital or physician fast. PROMPT TREATMENT IS ESSENTIAL TO COUNTERACT POISONING and should be initiated before signs and symptoms of injury appear.
IF ON SKIN: IMMEDIATELY wash with soap and water. See a doctor if diquat contacts a skin cut, abrasion, or area of irritation.
IF IN EYES: IMMEDIATELY wash eyes with water for at least 15 minutes and get medical attention.
IF INHALED: IMMEDIATELY get away from spray mist. Stop and check spray procedure. See a doctor if irritation persists.
NOTE TO PHYSICIANS: Call ZENECA Medical Emergency Information Network, 1-800-F-A-S-T-M-E-D (327-8633), at any hour to obtain toxicology information and a diquat analysis. To be effective, treatment for diquat poisoning must begin **IMMEDIATELY**. Treatment consists of binding diquat in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination, and removal of diquat from the blood by charcoal hemoperfusion or continuous hemodialysis.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D (327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC, 1-800-424-9300.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

MAY BE FATAL IF SWALLOWED, INHALED, OR ABSORBED THROUGH THE SKIN. CAUSES SUBSTANTIAL, BUT TEMPORARY, EYE INJURY. CAUSES SKIN IRRITATION. CONTACT WITH IRRITATED SKIN, OR A CUT, OR REPEATED CONTACT WITH INTACT SKIN MAY RESULT IN POISONING. Do not get in eyes, on skin, or on clothing. Do not breathe spray mist. Do not feed forage from treated crops to livestock. Keep livestock and pets out of treated fields and crop areas.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:
- Coveralls over short-sleeved shirt and short pants or coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

EXCEPTION: After this product has been diluted with at least 50 gallons of water, applicators for AQUATIC SURFACE APPLICATIONS must, at a minimum, wear (Note—Mixers and loaders for this application method must still wear the PPE as described in the above section):
- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves
- Protective eyewear

EXCEPTION: At a minimum, applicators for AQUATIC SUBSURFACE APPLICATIONS must wear (Note—Mixers and loaders for this application method must still wear the PPE as described in the above section):
- Short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Mixers, loaders, and applicators using closed systems who meet these requirements may wear: long-sleeved shirt and long pants, protective eyewear, waterproof gloves, shoes plus socks, and a chemical-resistant apron when mixing, loading, or cleaning equipment. If handling tasks are performed from inside an enclosed cab or aircraft with enclosed cockpits that meet these requirements, handlers may wear: long-sleeved shirt, long pants, shoes, and socks for the labeling-specified PPE. All labeling-specified PPE must be immediately available for use in an emergency. All applicable requirements as specified in 40 CFR 170.240(d)(4-6) must be followed.

User Safety Recommendations

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS (TERRESTRIAL AND AQUATIC USES)

This pesticide is toxic to wildlife. **For terrestrial uses,** do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters. **For aquatic uses,** do not apply directly to water except as specified on this label. Treatment of dense weed areas may result in oxygen loss from decomposition of dead weeds. This loss of oxygen may cause fish suffocation. Therefore, treat only ⅓ to ½ of the water body area at one time, especially if dense areas of weeds and/or algae exist, and wait 14 days between treatments.
Necessary approval and/or permits should be obtained prior to application if required. Consult the responsible State Agencies (i.e., Fish and Game agencies or Department of Natural Resources) before making applications to public waters.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop

ZENECA Professional Products

conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ZENECA, and Buyer and User assume the risk of any such use. ZENECA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

DIRECTIONS

REWARD® Landscape and Aquatic Herbicide is a nonvolatile herbicidal chemical for use as a general herbicide to control weeds in noncrop and aquatic areas. Absorption and herbicidal action is usually quite rapid with effects visible in a few days. REWARD Landscape and Aquatic Herbicide controls weeds by interfering with photosynthesis within green plant tissue. Weed plants should be succulent and actively growing for best results. Rinse all spray equipment thoroughly with water after use. AVOID SPRAY DRIFT to crops, ornamentals, and other desirable plants during application as injury may result. Application to muddy water may result in reduced control. Minimize creating muddy water during application. Use of dirty or muddy water for REWARD Landscape and Aquatic Herbicide dilution may result in reduced herbicidal activity. Avoid applying under conditions of high wind, water flow, or wave action.

Do not apply this product through any type of irrigation system.

AGRICULTURAL USES:

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants, or coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

COMMERCIAL GREENHOUSES AND NURSERIES: For general weed control in commercial greenhouses (beneath benches), field-grown and container stock, and other similar areas. REWARD Landscape and Aquatic Herbicide may be applied preplant or postplant preemergence in field-grown ornamental nursery plantings or postemergence as a directed spray. REWARD Landscape and Aquatic Herbicide may also be applied preemergence in ornamental seed crops (U.S., except California). Avoid contact with desirable foliage as injury may occur. Do not use on food or feed crops.

Spot spray: 1 to 2 quarts REWARD Landscape and Aquatic Herbicide plus the labeled rate of a 75% or greater nonionic surfactant per 100 gallons water or 0.75 ounce (22 ml) REWARD Landscape and Aquatic Herbicide plus the labeled rate of a 75% or greater nonionic surfactant per 1 gallon water.

Broadcast: 1 to 2 pints REWARD Landscape and Aquatic Herbicide in a minimum of 15 gallons water per acre. Add the labeled rate of a 75% or greater nonionic surfactant per 100 gallons spray mixture. Use an adequate spray volume to ensure good coverage.

ORNAMENTAL SEED CROPS (FLOWERS, BULBS, ETC.) U.S., except California: For preharvest desiccation of ornamental seed crops. NOT FOR FOOD OR FIBER CROPS.

Broadcast (Air or Ground): 1.5 to 2 pints REWARD Landscape and Aquatic Herbicide plus the labeled rate of a 75% or greater nonionic surfactant per acre in sufficient water (minimum of 5 gallons by air; 15 gallons by ground) for desiccation and weed burndown. Repeat as needed at no less than 5-day intervals up to 3 applications. Do not use seed, screenings, or waste as feed or for consumption.

NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas or vicinity where there may be drift.

For terrestrial uses, do not enter or allow entry of maintenance workers into treated areas, or allow contact with treated vegetation wet with spray, dew, or rain, without appropriate protective clothing until spray has dried.

For aquatic uses, do not enter treated areas while treatments are in progress.

DIRECTIONS FOR LANDSCAPE, INDUSTRIAL, RECREATIONAL, COMMERCIAL, RESIDENTIAL, AND PUBLIC AREAS:

REWARD Landscape and Aquatic Herbicide provides fast control of broadleaf and grassy weeds in industrial, recreational, golf course, commercial, residential, and public areas.

REWARD Landscape and Aquatic Herbicide is a nonselective herbicide that rapidly kills undesirable aboveground weed growth in 24 to 36 hours. Avoid application of REWARD Landscape and Aquatic Herbicide to desirable plants.

REWARD Landscape and Aquatic Herbicide is a contact/desiccant herbicide. It is essential to obtain complete coverage of the target weeds to get good control. Improper application technique and/or application to stressed weeds may result in unacceptable weed control. For best results, apply to actively growing, young weeds.

Difficult weeds (such as perennial or deeply rooted weeds) can often be controlled by tank mixing REWARD Landscape and Aquatic Herbicide with other systemic-type herbicides. Refer to other product labels for specific application directions.

For residual weed control, tank mix REWARD Landscape and Aquatic Herbicide with a preemergent herbicide labeled for the intended use site. When mixing REWARD Landscape and Aquatic Herbicide with another herbicide, it is recommended to mix just a small amount first to determine if the mixture is physically compatible before proceeding with larger volumes.

ZENECA has not tested all possible tank mixtures with other herbicides for compatibility, efficacy, or other adverse effects. Before mixing with other herbicides, ZENECA recommends you first consult your State experimental station, State university, or extension agent.

Grounds maintenance weed control:

REWARD Landscape and Aquatic Herbicide can be used as a spot or broadcast spray to control weeds in public, commercial, and residential landscapes, including landscape beds, lawns, golf courses, and roadsides. REWARD Landscape and Aquatic Herbicide can also be used for weed control around the edges and nonflooded portions of ponds, lakes, and ditches.

ZENECA Professional Products

Trim and edge weed control:

REWARD Landscape and Aquatic Herbicide can be used to eliminate undesired grass and broadleaf plant growth in a narrow band along driveways, walkways, patios, cart paths, fence lines, and around trees, ornamental gardens, buildings, and other structures, and beneath noncommercial greenhouse benches. Vegetation control with REWARD Landscape and Aquatic Herbicide is limited to the spray application width. Do not exceed the labeled rate of REWARD Landscape and Aquatic Herbicide as excessive rates may result in staining of concrete-based materials.

REWARD Landscape and Aquatic Herbicide, since it does not translocate systemically, can be used as an edging or pruning tool when precisely applied to select areas of grass or to undesirable growth on desirable ornamental bedding plants, ground covers, etc.

Industrial weed control:

REWARD Landscape and Aquatic Herbicide can be used as a spot or broadcast spray either alone or in combination with other herbicides as a fast burndown or to control weeds in rights-of-ways, railroad beds/yards, highways, roads, dividers and medians, parking lots, pipelines, pumping stations, public utility lines, transformer stations and substations, electric utilities, storage yards, and other noncrop areas.

Spot spray: 1 to 2 quarts REWARD Landscape and Aquatic Herbicide plus the labeled rate of a 75% or greater nonionic surfactant per 100 gallons water or 0.75 ounce (22 ml) REWARD Landscape and Aquatic Herbicide plus the labeled rate of a 75% or greater nonionic surfactant per 1 gallon water.

Broadcast: 1 to 2 pints REWARD Landscape and Aquatic Herbicide in a minimum of 15 gallons water per acre. Add the labeled rate of 75% or greater nonionic surfactant per 100 gallons spray mixture. Use an adequate spray volume to ensure good coverage. Greater water volumes are necessary if the target plants are tall and/or dense. It is recommended that 60 gallons or greater water volume be used to obtain good coverage of dense weeds.

TURF RENOVATION (All Turf Areas Except Commercial Sod Farms)

To desiccate golf course turf and other turf areas prior to renovation, apply 1 to 2 pints of REWARD Landscape and Aquatic Herbicide per acre plus the labeled rate of a 75% or greater nonionic surfactant in 20 to 100 gallons of water (4 teaspoons of REWARD Landscape and Aquatic Herbicide plus the labeled rate of 75% or greater nonionic surfactant per 1 gallon of water) using ground spray equipment. Apply for full coverage and thorough contact with the turfgrass. Apply only when the turf is dry, free from dew and incidental moisture. For enhanced turf desiccation, especially in the case of thick turfgrass, water volumes should approach 100 gallons of water per acre.

For **suppression** of regrowth and quick desiccation of treated turfgrass, REWARD Landscape and Aquatic Herbicide may be mixed with other systemic nonselective or systemic postemergence grassy weed herbicides. Refer to other product labels for specific application directions and restrictions.

Avoid spray contact with, or spray drift to, foliage of ornamental plants or food crops.

Do not graze livestock on treated turf or feed treated thatch to livestock.

DORMANT ESTABLISHED TURFGRASS (Bermudagrass, zoysiagrass) NON-FOOD OR FEED CROP

For control of emerged annual broadleaf and grass weeds, including Little Barley,* Annual Bluegrass, Bromes including Rescuegrass, Sixweeks fescue, Henbit, Buttercup, and Carolina Geranium in established dormant bermudagrass lawns, parks, golf courses, etc.

Apply 1 to 2 pints REWARD Landscape and Aquatic Herbicide per acre in 20 to 100 gallons spray mix by ground as a broadcast application. Add the labeled rate of a 75% or greater nonionic surfactant per 100 gallons spray mixture.

Bermudagrass must be dormant at application. Application to actively growing bermudagrass may cause delay or permanent injury. Users in the extreme Southern areas should be attentive to the extent of dormancy at the time of application.

*For control of Little Barley, apply REWARD Landscape and Aquatic Herbicide prior to the mid-boot stage.

AQUATIC USE DIRECTIONS

New York—Not for Sale or Use in New York State without Supplemental Special Local Needs Labeling.

Necessary approval and/or permits should be obtained prior to application if required. Consult the responsible State Agencies (i.e., Fish and Game agencies or Department of Natural Resources). Treatment of dense weed areas may result in oxygen loss from decomposition of dead weeds. This loss of oxygen may cause fish suffocation. Therefore, treat only ⅓ to ½ of the water body area at one time and wait 14 days between treatments.

For application only to **still water** (i.e., ponds, lakes, and drainage ditches) where there is minimal or no outflow to public waters.

and/or

For applications to **public waters** in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams, rivers, and other slow-moving or quiescent bodies of water for control of aquatic weeds. For use by:

— Corps of Engineers; or
— Federal or State Public Agencies (i.e., Water Management District personnel, municipal officials); or
— Applicators and/or Licensees (Certified for aquatic pest control) that are authorized by the State or local government.

Treated water may be used according to the following table or until such time as an approved assay (example: PAM II Spectromatic Method) shows that the water does not contain more than the designated maximum contaminant level goal (MCLG) of 0.02 mg/l (ppm) of diquat dibromide (calculated as the cation):

WATER USE RESTRICTIONS FOLLOWING APPLICATIONS WITH REWARD LANDSCAPE AND AQUATIC HERBICIDE (Days)

Application Rate	Drinking	Fishing and Swimming	Livestock Consumption	Spray Tank Applications** and Irrigation to Turf and Ornamentals	Spray Tank Applications** and Irrigation/ Food Crops
2 gals./ surface acre	3 days	0	1 day	3 days	5 days
1 gal./ surface acre	2 days	0	1 day	2 days	5 days
0.75 gal./ surface acre	2 days	0	1 day	2 days	5 days
0.50 gal./ surface acre	1 day	0	1 day	1 day	5 days
Spot Spray* (< 0.5 gal./ surface acre)	1 day	0	1 day	1 day	5 days

*Rates refer to total surface area.
**For preparing agricultural sprays for food crops, turf, or ornamentals (to prevent phytotoxicity), do not use water treated with REWARD Landscape and Aquatic Herbicide before the specified time period.

When the contents of more than one spray tank is necessary to complete a single aquatic application, no water holding restrictions apply between the consecutive spray tanks.

No applications are to be made in areas where commercial processing of fish, resulting in the production of fish protein concentrate or fish meal, is practiced. Before application, coordination and approval of local and/or State authorities must be obtained.

Apply REWARD Landscape and Aquatic Herbicide in accordance with the following table:

WEED SPECIES	SUBSURFACE OR BOTTOM PLACEMENT GALS/SURFACE ACRE*	SURFACE GALS/SURFACE ACRE*
Bladderwort (*Utricularia* spp.)	1 to 2	2
Coontail (*Ceratophyllum demersum*)	2	2
Elodea (*Elodea* spp.)	2	2
Naiad (*Naja*s spp.)	1 to 2	2
Pondweeds[1] (*Potamogeton* spp.)	2	2
Watermilfoils (*Myriophyllum* spp.)	1 to 2	2
Hydrilla (*Hydrilla verticillata*)	2	2
Water-lettuce[2] (*Pistia Stratiotes*)	NA	0.5 to 0.75
Water-hyacinth[2] (*Eichhornia crassipes*)	NA	0.5 to 0.75
Pennywort[3] (*Hydrocotyle* spp.)	NA	0.5 to 0.75
Frog's Bit[6] (*Limnobium spongia*)	NA	0.5 to 0.75
Salvinia[2] (*Salvinia* spp.)	NA	0.5 to 0.75
Duckweed[4] (*Lemna* spp.)	NA	1
Cattails[3] (*Typha* spp.)	NA	1 to 2
Algae[5] (*Spirogyra* spp. & *Pithophora* spp.)	1 to 2	2

*For water less than or equal to 2 feet in average depth of treatment area, use a maximum of 1 gallon REWARD Landscape and Aquatic Herbicide per surface acre. Lowest rates should be used in shallow areas where the water depth is considerably less than the average depth of the entire treatment area, for example, shallow shoreline areas. At water temperatures below 50° to 60°F efficacy and immediacy of results may be reduced.

ZENECA Professional Products

[1]REWARD Landscape and Aquatic Herbicide controls *Potamogetan* species except Richardson's pondweed *(P. richardsonii)*. For control of *P. robbinsii*, applications must be made when the plants are in the early stages of growth such as in Spring and early Summer.

[2]For salvinia, water-lettuce and water-hyacinth, use the labeled rate of REWARD Landscape and Aquatic Herbicide in 75 to 200 gallons water plus the labeled rate of a 75% or greater nonionic surfactant per acre for surface sprays, and for aerial application for water-lettuce and water-hyacinth control, apply the labeled rate of REWARD Landscape and Aquatic Herbicide in 10 to 24 gallons water plus the labeled rate of a 75% or greater nonionic surfactant per acre.

[3]For Pennywort and cattail control, apply in 50 to 150 gallons of water plus the labeled rate of a 75% or greater nonionic surfactant per acre for full coverage and thorough weed contact. Repeat treatments may be necessary to control regrowth. For best results, apply before flowering (cattail).

[4]For duckweed control, apply as an overall spray in 50 to 150 gallons of water plus the labeled rate of a 75% or greater nonionic surfactant per acre. Retreatment may be necessary for plants missed in previous applications and regrowth.

[5]For suppression of certain filamentous algae species, including *Spirogyra* and *Pithophora*, apply according to the submersed use directions.

[6]Not for use in California.

APPLICATION: In mixed weed populations, use the high rate of application as indicated by weeds present.

SUBSURFACE APPLICATIONS: Where the submersed weed growth, especially Hydrilla, has reached the water surface, apply either in a water carrier or an invert emulsion through boom trailing hoses carrying nozzle tips to apply the dilute spray below the water surface to ensure adequate coverage.

BOTTOM PLACEMENT: Where the submersed weeds, especially Hydrilla, Bladderwort, and Coontail growth have reached the water surface or where water is slowly moving through the submersed weed growth that has reached the water surface, especially Hydrilla, Bladderwort, and Coontail, control may be enhanced when applied in an invert emulsion carrier injecting diluted REWARD Landscape and Aquatic Herbicide near the bottom with weighted hoses. The addition of a copper-based algaecide will improve control. Where algae are present along with the submersed weeds, pretreatment with copper-based algaecide at recommended rates is advised for best results.

SURFACE APPLICATION: For submerged aquatic weeds, apply REWARD Landscape and Aquatic Herbicide either as concentrate slowly poured directly from the container in strips or as a spray in a sufficient carrier. Applications should be made to ensure complete coverage of the weed areas. In mixed weed populations, use the high rate of application as indicated by weeds present.

IF POSTING IS REQUIRED BY YOUR STATE OR TRIBE—CONSULT THE AGENCY RESPONSIBLE FOR PESTICIDE REGULATIONS FOR SPECIFIC DETAILS.

GENERAL RECOMMENDATIONS FOR "POSTING NOTIFICATION"*

- **Flowing water:** "post" the restricted area (within/at 1600 feet downstream of treatment) for the duration of the water use restriction.
- **Standing water:** "post" the restricted area (within/at ¼ mile of treatment) for the duration of the water use restriction.
- **No "posting" is necessary where water use is greater than 1600 feet downstream of treated water in flowing water bodies or where water use is greater than ¼ mile from treated water in standing water bodies.**

*"Posting" should be removed at the end of the restriction period.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited.

STORAGE: Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Do not contaminate feed, foodstuffs, or drinking water. Do not store or transport near feed or food. Store at temperature above 32°F. For help with any spill, leak, fire, or exposure involving this material, call CHEMTREC (1-800-424-9300).

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Do not reuse container. Incinerate, burn, or puncture and dispose of in a sanitary landfill, or dispose of by other procedures allowed by State and local authorities. If burned, stay out of smoke.

FOR BULK AND MINI-BULK CONTAINERS:

CONTAINER DISPOSAL: Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning, or clean in accordance with manufacturer's instructions.

CONTAINER PRECAUTIONS: Before refilling, inspect thoroughly for damage, such as cracks, punctures, bulges, dents, abrasions, and damaged or worn threads on closure devices.

REFILL ONLY WITH REWARD® LANDSCAPE AND AQUATIC HERBICIDE. The contents of this container cannot be completely removed by cleaning. Refilling with materials other than REWARD Landscape and Aquatic Herbicide will result in contamination and may weaken container.

After filling and before transporting, check for leaks.

Do not refill or transport damaged or leaking container.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

This is a specimen label and may be inaccurate or out of date. It is intended as a guide in providing general information regarding use of this product. Always read and follow the EPA approved label on the product container.

For current information, contact ZENECA Professional Products at 1-888-617-7690.

069802

Made in U.S.A.

ZENECA Professional Products
1800 Concord Pike
Wilmington, DE 19850-5458

A business unit of ZENECA Inc.

ZPP-REW-001 9/98

EXHIBIT J-2
Page 1 of 2

PRODUCT INFORMATION

ZENECA Professional Products

ZENECA Inc.
Professional Products
1800 Concord Pike
P.O. Box 15458
Wilmington, DE 19850-5458

Telephone: (302) 886-1000
FAX: (302) 886-1644
zenecaprofprod.com

REGISTRATION FOR SPECIAL LOCAL NEED FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF CALIFORNIA

REWARD® Landscape and Aquatic Herbicide

EPA Reg. No. 10182-404

For the Control of *Egeria densa* and other submersed weeds:

For applications to public waters in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams, rivers and other slow-moving or quiescent bodies of water for control of aquatic weeds. For use by:

- **Corps of Engineers; or**
- **Federal or State Public Agencies; or**
- **Applicators and/or licensees (Certified for aquatic pest control) that are authorized by the State or local government.**

Treated water may be used according to the table found on the Federal label or until such time as an approved assay (example: PAM II Spectromatic Method) shows that the water does not contain more than the designated maximum contaminant level goal (MCLG) of 0.02 mg/l (ppm) of diquat dibromide (calculated as the cation).

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Application Directions

For the control of submersed weeds, apply REWARD Herbicide at the rate of 0.5 - 2 gallons per 4 acre feet of water (target concentration not to exceed 0.37 ppm). Use 2 gallons per 4 acre feet of water for large or dense weed populations. For example: Apply 4 gallons REWARD Herbicide per surface acre in a minimum of 8 foot depth of water, or 6 gallons REWARD Herbicide per surface acre in a minimum of 12 foot depth of water.

Apply REWARD Herbicide in sufficient carrier to ensure good weed plant coverage either to the surface in a low/no pressure application or subsurface.

Repeat applications should be made on 14-day intervals as needed to ensure control of missed plants and regrowth.

- For best results, begin applications when water temperatures reach 50 degrees. Applications to water colder than 50 degrees may result in unacceptable control.
- For best results, begin applications in the early spring when plants are young and in the early stages of growth.

Do not make more than 4 applications to a treated area per year.

Refer to the Aquatic Use Directions on the EPA Federal label for additional directions, restrictions, precautions and postings.

This label must be in the possession of the user at the time of pesticide application.

EXHIBIT J-2
Page 2 of 2

CONDITIONS OF SALE
AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ZENECA, and Buyer and User assume the risk of any such use. ZENECA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

REWARD® is a trademark of a Zeneca Group Company.

24(c) Registrant: Zeneca Inc.
Wilmington, Delaware 19850-5458

EPA SLN No. CA-990028

ZPP-REW-008 11/99
RS-111599

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

Section 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company	: Zeneca Agricultural Products 1800 Concord Pike Wilmington DE 19850
Phone number	: (302) 886-1000
Emergency phone	: Medical: 800-327-8633 (1-800 FASTMED) Chemtrec: 800-424-9300 Technical:302-886-3000
Name used on label	: REWARD Landscape and Aquatic Herbicide
Product use	: Herbicide

A Registered Trade Mark of a Zeneca Group Company.

Section 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Identity CAS-no.	Typical %	Other information
diquat	36.4 %	
inerts	63.6 %	

Ingredients not precisely identified are proprietary or non hazardous. Values are not product specifications.

Section 3 – HAZARDS IDENTIFICATION

Physical hazards:
Corrosive to aluminum.

Health hazards:
Irritant (eye, skin, respiratory passages, skin sensitizer). Harmful (oral) Toxic by skin absorption. Toxic (inhalation), inhalation (TLV).

Section 4 – FIRST AID MEASURES

GENERAL ADVICE:
If a known exposure occurs or is suspected, immediately start the recommended procedures below. If further treatment is required, contact a Poison Center, a physician or the nearest hospital. Inform the person contacted of the type and extent of exposure, describe the victim's

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

symptoms, and follow the advice given.

IF IN EYES:
Immediately flush with plenty of water for at least 15 minutes. Have eyes examined and treated by medical personnel. The degree of injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment.

IF ON SKIN:
Wash material off the skin with plenty of soap and water. If redness occurs or diquat contacts a skin cut or an area of abrasion, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

IF SWALLOWED:
Provided the patient is conscious, wash out mouth with water. Induce vomiting by sticking finger down throat. Repeat until vomitus is clear. Immediately contact Zeneca's Emergency Information Network at 1-800-F-A-S-T-M-E-D (327-8633). If bentonite, activated charcoal or Fuller's earth is available, administer it. Obtain immediate medical attention.

IF INHALED:
Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel.

MEDICAL ADVICE:
To be effective, treatment for diquat poisoning must begin immediately. Treatment consists of binding diquat in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination, and removal of diquat from blood by charcoal hemoperfusion.

Section 5 – FIRE FIGHTING MEASURES

Flash point :
Not applicable.
Autoignition temperature :
Not applicable.
Flammable limits (STP): :
Not applicable.
EXTINGUISHING MEDIA:
Water fog, alcohol foam, carbon dioxide, dry chemical, halogenated agents.
PROTECTIVE EQUIPMENT:

Page 2 of 9

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

Self-contained breathing apparatus with full facepiece and protective clothing.

NFPA RATING

Health

2

Fire

0

Reactivity

0

Unusual fire and explosion hazards:

Possible toxic smoke, vapors, fallout and runoff water can result from fires depending on extent of combustion and presence of other combustible materials. Contaminated buildings, areas, and equipment must be properly decontaminated before reuse.

Section 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Steps to be taken in case material is released or spilled:
Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Use adequate ventilation and wear an air-supplied respirator to prevent inhalation. Wear suitable protective clothing and eye protection to prevent skin and eye contact.

METHODS FOR CLEANING UP:

Do not allow the material to enter streams, sewers or other waterways.
Spread a suitable absorbent such as clay on the spill, and shovel into an open drum.
Generously cover the contaminated areas with common, household detergent (e.g. TIDE, registered trademark of Proctor & Gamble Co.). Using a stiff brush and small amounts of water, work the detergent into the remaining spilled material forming a slurry. Brush the slurry into cracks and crevices and allow to stand for 2-3 minutes. Be careful to completely avoid skin or eye contact. Do not splatter on oneself or bystanders.
Spread absorbent on the slurry liquid and shovel mixture into the open drum.
Rinse with small amount of water and use absorbent to collect the wash solution. Shovel into the open drum.
Seal drum and dispose of contaminated material in a facility permitted for hazardous waste. Large spills should be handled according to a spill plan. Otherwise, in case of emergency call, day or night, 800-424-9300, Chemtrec.

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

Section 7 – HANDLING AND STORAGE

REQUIREMENTS FOR STORAGE ROOMS:
Containers should be stored in a cool, dry, well-ventilated area away from flammable materials and sources of heat or flame. Exercise due caution to prevent damage to or leakage from the container.
ADDITIONAL INFORMATION:
Do not store near feed, food, or within the reach of children.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits
TLV/ACGIH diquat
8 hour TWA 0.5 mg/m³
diquat
10 minute STEL 1 mg/m³

TLV or suggested control value:
Minimize exposure in accordance with good hygiene practice.
ENGINEERING CONTROLS:
This product is intended for use outdoors where engineering controls are not necessary. If use conditions are different (e.g. product reformulation or repackaging), use ventilation adequate to maintain safe levels.
EYE PROTECTION:
Eye contact with the material should be avoided through the use of chemical safety glasses, goggles or a faceshield, selected in regard to exposure potential.
BODY PROTECTION:
Skin contact should be prevented through the use of impervious gloves, footwear, long-sleeved clothing, and wide brimmed hat. Remove contaminated clothing and wash before rewearing. Wash separately from other laundry.
RESPIRATORY PROTECTION:
No special respiratory protection is normally required. However, if the concentrate is spilled and allowed to stand, it can dry to a highly irritating dust. If needed, use MSHA-NIOSH approved respirator for pesticides.
Other protective equipment:
An adequate supply of clean potable water should be available to allow thorough flushing of skin and eyes in event of contact with this compound.
Special precautions or other comments:
Prevent skin and eye contact with this material. Avoid breathing vapors or aerosols. A sensitized individual should not be exposed to the product which caused the sensitization.

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid
Physical state	: concentrate
Color	: dark brown
Odor	: odorless
Boiling point	: No data.
Vapor Pressure	: No data. at 20 °C Method: mmHg
Vapour density	: No data. (air = 1)
Specific gravity:	: 1.22 .. 1.27 at 20 °C
Solubility	: soluble
pH-value (quant.)	: 6 .. 7.5
Volatile by volume:	: No data.

Section 10 – STABILITY AND REACTIVITY

HAZARDOUS REACTIONS (CONDITIONS TO AVOID)
Stability:
Stable under normal conditions.
Incompatibility:
Strong alkalis and anionic wetting agents (e.g., alkyl and alkylaryl sulfonates). Corrosive to aluminum.
Hazardous polymerization:
Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS
Combustion products: Carbon dioxide, carbon monoxide. Combustion or thermal decompositon will evolve toxic and irritant vapors.

Section 11 – TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (LETHAL DOSES)

LD50 Ingestion male rats
Dose : 810 mg/kg

LD50 Ingestion female rats
Dose : 600 mg/kg
Additional inform. : A single dose of this product is classified as

Page 5 of 9

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

"slightly toxic" by ingestion. Irritation of the mouth, pharynx, esophagus and stomach can develop following ingestion. The degree of injury will depend on the amount absorbed from the gut. Symptoms following ingestion of diquat concentrate may initially include nausea, vomiting, abdominal pain and severe irritation of the mouth, throat and esophagus. These can be followed by kidney failure and other internal organ involvement.

LD50 Skin absorption male rabbits
Dose : 260 mg/kg

LD50 Skin absorption female rabbits
Dose : 315 mg/kg
Additional inform. : This material is classified as "moderately toxic" by absorption. The degree of injury will depend on the amount absorbed. Because diquat is an ionized compound, it has a slow rate of absorption through intact skin. Prolonged or repeated contact may result in skin damage, thus allowing more of the chemical to be absorbed. This could result in systemic poisoning as evidenced by injury to internal organs, primarily the kidneys. The no-observed-effect level (noel) for dermal toxicity of diquat technical was found to be 5mg/kg/day in a 21 day study in rats.

LC50 Inhalation male rats
Dose : 121 mg/m³

LC50 Inhalation female rats
Dose : 132 mg/m³
Additional inform. : This substance is considered moderately toxic by inhalation. The degree of injury will depend on the airborne concentration and duration of exposure. Diquat is a water - soluble salt which has no measurable vapor pressure. Therefore, inhalation hazard from diquat vapor is minimal. If the concentrate is spilled and allowed to stand, it can dry to a highly irritating dust. Symptoms of inhalation overexposure may include headache, nosebleed, sore throat and coughing.

Dermal human
Additional inform. : Short contact periods with human skin are not usually associated with skin irritation; repeated and/or

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

prolonged contact can result in skin irritation.
Repeated and/or prolonged contact may cause dermatitis.

ACUTE TOXICITY (IRRITATION, SENSITIZATION ETC.)

Eye contact human
Results : IRRITANT
Additional inform. : This material may irritate human eyes following contact and could cause prolonged (weeks) impairment of vision. The degree of injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment. Symptoms may include pain, tearing, swelling, redness, and blurred vision.

GENERAL INFORMATION ABOUT ACUTE OR OTHER TOXICITIES
General information
This description of toxicological properties is based on experimental results and experience with the material.
Other effects of overexposure:
No other adverse clinical effects have been associated with exposure to this material.

Section 12 – ECOLOGICAL INFORMATION

ADDITIONAL INFORMATION ABOUT ECOLOGY
This material is toxic to fish and wildlife.

Section 13 – DISPOSAL CONSIDERATIONS

Disposal Method:
This product is toxic by inhalation and skin absorption and must be handled with caution. Do not contaminate waterways by cleaning of equipment or by disposal of wastes. Untreated effluent should not be discharged where it will drain into lakes, streams, or ponds. Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Disposal should be in accordance with local, state or national legislation.
Container disposal:
Empty container retains product residue. Observe all hazard precautions. Do not distribute or make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

Page 7 of 9

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

Section 14 – TRANSPORT INFORMATION

ROAD TRANSPORT DOT
Corrosive liquid, n.o.s. (contains diquat as dibromide salt), 8, UN1760, PG III.
RQ = 1000 lbs. (450 kgs)

Section 15 – REGULATORY INFORMATION

HAZARDOUS INGREDIENTS
diquat

Other regulations, restrictions and prohibitions

TSCA (Toxic Substances Control Act) Regulations, 40CFR 710:
This product is a pesticide and is exempt from TSCA regulation.

Other Determined Regulations:
California Proposition 65: WARNING. This product contains a chemical known to the State of California to cause cancer.

EPA
EPA Registration no.: 10182-404

Section 16 – OTHER INFORMATION

We assigned NFPA and HMIS ratings to this product based on the hazards of its ingredient(s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product MSDS.
This information is intended solely for the use of individuals trained in the particular hazard rating system.

ZENECA Ag Products believes that the information and recommendations contained herein (including data and statements) are accurate as of the date thereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use of the product and of the information referred to herein are beyond the control of ZENECA Ag Products, ZENECA

ZENECA Ag Products

MATERIAL SAFETY DATA SHEET

REWARD Landscape and Aquatic Herbicide

MSDS No. US006062_01

Version: 2 Date issued: 03/26/99 Date printed: 03/29/99

Ag Products expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

A vertical bar (|) in the left margin indicates an amendment from the previous version.

Appendix K

Sonar A.S. and Sonar SRP Labels and Material Safety Data Sheets

Appendix K includes the label and material safety data sheets for both Sonar A.S. and Sonar SRP. **Exhibit K-1** is the label and **Exhibit K-2** is the material safety data sheet for Sonar A.S. **Exhibit K-3** is the label and **Exhibit K-4** is the material safety data sheet for Sonar SRP.

EXHIBIT K-1
Page 1 of 4

Specimen Label

Herbicide

A herbicide for management of aquatic vegetation in fresh water ponds, lakes, reservoirs, drainage canals and irrigation canals

Active Ingredient:
fluridone: 1-methyl-3-phenyl-5-[3-(trifluoromethyl)phenyl]-4(1*H*)-pyridinone..... 41.7%
Inert Ingredients..... 58.3%
Total.....100.0%
Contains 4 pounds active ingredient per gallon.

EPA Reg. No. 67690-4

Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

CAUTION PRECAUCION

Precaucion al usuario: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

Harmful If Swallowed, Absorbed Through Skin, Or If Inhaled

Avoid breathing of spray mist or contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Wash exposed clothing before reuse.

*Trademark of SePRO Corporation

First Aid

If in eyes: Flush eyes or skin with plenty of water. Get medical attention if irritation persists.
If swallowed: Call a physician or poison control center, drink one or two glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.
If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

Environmental Hazards

Follow use directions carefully so as to minimize adverse effects on nontarget organisms. In order to avoid impact on threatened or endangered aquatic plant or animal species, users must consult their State Fish and Game Agency or the U.S. Fish and Wildlife Service before making applications.

Do not contaminate water when disposing of equipment washwaters. Trees and shrubs growing in water treated with Sonar A.S. herbicide may occasionally develop chlorosis. Do not apply in tidewater/brackish water.

Lowest rates should be used in shallow areas where the water depth is considerably less than the average depth of the entire treatment site, for example, shallow shoreline areas.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.
Shake well before using.

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal.
Storage: Store in original container only. Do not store near feed or foodstuffs. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.
Pesticide Disposal: Wastes resulting from use of this product may be used according to label directions or disposed of at an approved waste disposal facility.
Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Sonar® A.S. Herbicide

General Information

Sonar A.S. herbicide is a selective systemic aquatic herbicide for management of aquatic vegetation in fresh water ponds, lakes, reservoirs, drainage canals and irrigation canals. Sonar A.S. is absorbed from water by plant shoots and from hydrosoil by the roots of aquatic vascular plants. It is important to maintain the recommended concentration of Sonar A.S. in contact with the weeds as long as possible. Rapid water movement or any condition which results in rapid dilution of Sonar A.S. in treated water will reduce its effectiveness. In susceptible plants, Sonar A.S. inhibits the formation of carotene. In the absence of carotene, chlorophyll is rapidly degraded by sunlight. Herbicidal symptoms of Sonar A.S. appear in seven to ten days and appear as white (chlorotic) or pink growing points. Under optimum conditions 30 to 90 days are required before the desired level of aquatic weed management is achieved with Sonar A.S. Species susceptibility to Sonar A.S. may vary depending on time of year, stage of growth, and water movement. For best results, apply Sonar A.S. prior to initiation of weed growth or when weeds begin active growth.

Sonar A.S. is not corrosive to application equipment.

General Use Precautions

Obtain Required Permits: Consult with appropriate state or local water authorities before applying this product. Permits may be required by state or local public agencies.

Chemigation: Do not apply Sonar A.S. through any type of irrigation system.

Potable Water Intakes: In lakes and reservoirs, do not apply Sonar A.S. within one-fourth mile (1320 feet) of any functioning potable water intake. **Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes.**

Irrigation: Irrigation with water treated with Sonar A.S. may result in injury to the irrigated vegetation. SePRO recommends informing those who irrigate from areas treated with Sonar A.S. of the irrigation time frames presented in the table below. These time frames are suggestions which should be followed to reduce the potential for injury to vegetation irrigated with water treated with Sonar A.S.:

	Days After Application		
Application Site	Established Tree Crops	Established Row Crops Turf/Plants	Newly Seeded Crops/Seedbeds or Areas to be Planted Including /Overseeded Golf Course Greens
†Ponds and Static Canals	7	30	30
Canals	7	14	30
††Lakes and Reservoirs	7	14	14

†For purposes of Sonar A.S. labeling, a pond is defined as a body of water 10 acres or less in size. A lake or reservoir is greater than 10 acres.

††In lakes and reservoirs where one-half or greater of the body of water is treated, use the pond and static canal irrigation restrictions.

Weed Control Information

Vascular Aquatic Plants Controlled by Sonar A.S.

Floating Plants:

Common duckweed (*Lemna minor*)†

Emersed Plants:

spatterdock (*Nuphar luteum*)
water-lily (*Nymphaea* spp.)

†Controlled only with a surface application of Sonar AS.

Submersed Plants:

bladderwort (*Utricularia* spp.)
common coontail (*Ceratophyllum demersum*)
common elodea (*Elodea canadensis*)
egeria, Brazilian elodea (*Egeria densa*)
fanwort, cabomba (*Cabomba caroliniana*)
hydrilla (*Hydrilla verticillata*)
naiad (*Najas* spp.)
pondweed (*Potamogeton* spp., except Illinois pondweed)
watermilfoil *(Myriophyllum* spp.)

Shoreline Grasses:

paragrass (*Brachiaria mutica*)

Vascular Aquatic Plants Partially Controlled by Sonar A.S.

alligatorweed (*Alternanthera philoxeroides*)
American lotus (*Nelumbo lutea*)
cattail (*Typha* spp.)
common watermeal (*Wolffia columbiana*)††
creeping waterprimrose (*Ludwigia peploides*)
giant cutgrass (*Zizaniopsis miliacea*)
Illinois pondweed (*Potamogeton illinoensis*)
parrotfeather (*Myriophyllum brasiliense*)
reed canarygrass (*Philaris arundinaceae*)
smartweed (*Polygonum* spp.)
spikerush (*Eleocharis* spp.)
southern watergrass (*Hydrochloa caroliniensis*)
torpedograss (*Panicum repens*)
waterpurslane (*Ludwigia palustris*)
watershield (*Brasenia schreberi*)

††Partial control only with a surface application of Sonar A.S. at the maximum labeled rate.

Vascular Aquatic Plants Not Controlled by Sonar A.S.

algae *(Chara* and *Nitella*)
American frogbit (*Limnobium spongia*)
arrowhead (*Sagittaria* spp.)
bacopa (*Bacopa* spp.)
big floatingheart, banana lily (*Nymphoides aquatica*)
bulrush (*Scirpus* spp.)
floating waterhyacinth (*Eichhornia crassipes*)
maidencane (*Panicum hemitomon*)
pickerelweed, lanceleaf (*Pontederia cordata*)
rush (*Juncus* spp.)
tapegrass, American eelgrass (*Vallisneria americana*)
waterlettuce (*Pistia stratiotes*)
water pennywort (*Hydrocotyle umbellata*)

Mixing and Application Directions

The aquatic plants present in the treatment site should be identified prior to application to determine their susceptibility to Sonar A.S. It is important to determine the area (acres) to be treated and the average depth in order to select the proper application rate. Do not exceed the maximum labeled rate for a given treatment site per annual growth cycle.

Shake Sonar A.S. well before using. Add the recommended amount of Sonar A.S. to water in the spray tank during the filling operation. Agitate while filling and during spraying. Surface or subsurface application of the spray can be made with conventional spray equipment. Sonar A.S. can also be applied near the surface of the hydrosoil using weighted trailing hoses. A spray volume of 5 to 100 gallons per acre may be used. Sonar A.S. may also be diluted with water and the concentrated mix metered into the pumping system.

Application to Ponds

Sonar A.S. may be applied to the entire surface area of a pond. Rates may be selected to provide 0.06 to 0.09 ppm of active ingredient in the treated water. Application rates necessary to obtain these active ingredient concentrations in treated water are shown in the following table. When average water depth of the treatment site is greater than 5 feet, apply 1 to 1.5 quarts of Sonar A.S. per treated surface acre.

Average Water Depth of Treatment Site (feet)	Quarts of Sonar A.S. per Treated Surface Acre
1	0.16 - 0.25
2	0.33 - 0.50
3	0.50 - 0.75
4	0.65 - 1.00
5	0.80 - 1.25

Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control species.

Application to Lakes and Reservoirs

For best results in lakes and reservoirs, Sonar A.S. treatment areas should be a minimum of 5 acres in size. Treatment of areas smaller than 5 acres or treatment of narrow strips such as boat lanes or shorelines may not produce satisfactory results due to dilution by untreated water. In lakes and reservoirs, do not apply Sonar A.S. within one-fourth mile (1320 feet) of any functioning potable water intake.

Rates may be selected to provide 0.075 to 0.15 ppm of active ingredient in the treated water. Application rates necessary to obtain these active ingredient concentrations in treated water are shown in the following table. When average water depth of the treatment site is greater than 10 feet, apply 3 to 4 quarts of Sonar A.S. per treated surface acre.

Average Water Depth of Treatment Site (feet)	Quarts of Sonar A.S. per Treated Surface Acre
1	0.2 - 0.4
2	0.4 - 0.8
3	0.6 - 1.2
4	0.8 - 1.6
5	1.0 - 2.0
6	1.2 - 2.4
7	1.4 - 2.8
8	1.6 - 3.2
9	1.8 - 3.6
10	2.0 - 4.0

Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control species.

Use Rates for Control of Eurasian Watermilfoil in Whole Lake or Reservoir Treatments: The following application rates may be used for control of Eurasian watermilfoil when treating lakes or reservoirs where little dilution with untreated water is expected to occur. Under these conditions, Sonar may be applied to provide a concentration of 0.01 to 0.02 ppm (10 to 20 ppb) of active ingredient in treated water. Application rates necessary to achieve these active ingredient concentrations in treated water are shown in the following table. For optimum control, it is recommended that applications be made early in the growing season.

Average Water Depth of Treatment Site (feet)	Quarts of Sonar A.S. per Treated Surface Acre
1	0.027 - 0.05
2	0.05 - 0.11
3	0.08 - 0.16
4	0.11 - 0.22
5	0.14 - 0.27
6	0.16 - 0.32
7	0.19 - 0.38
8	0.22 - 0.43
9	0.24 - 0.49
10	0.27 - 0.54

When treated with these use rates, other less susceptible species listed under Aquatic Plants Controlled may exhibit only temporary injury or stunting followed by recovery and normal growth. These 0.01 to 0.02 ppm rates may be applied where functioning potable water intakes are present. Note: When applications for management of Eurasian watermilfoil are made to only portions of lakes or reservoirs such as bays or fingers of these water bodies, the higher rates and use directions listed on this label for Applications to Lakes and Reservoirs are recommended.

Application Rate Calculation - Ponds, Lakes and Reservoirs

The amount of Sonar A.S. to be applied to provide the desired ppm concentration of active ingredient in treated water may be calculated as follows:

Quarts of Sonar A.S. required per treated surface acre = Average water depth of treatment site (feet) **x** Desired ppm concentration of active ingredient **x** 2.7

For example, the quarts per acre of Sonar A.S. required to provide a concentration of 0.075 ppm of active ingredient in water with an average depth of 5 feet is calculated as follows:

5 **x** 0.075 **x** 2.7 = 1.0 quart per treated surface acre.

When measuring quantities of Sonar A.S., quarts may be converted to fluid ounces by multiplying quarts to be measured **x** 32. For example, 0.25 quarts **x** 32 = 8 fluid ounces.

Note: Calculated rates should not exceed the maximum allowable rate in quarts per treated surface acre for the water depth listed in the application rate table for the site to be treated.

Application to Drainage Canals and Irrigation Canals

In drainage and irrigation canals, Sonar A.S. should be applied at the rate of 2 quarts per treated surface acre. Where water retention is possible, the performance of Sonar A.S. will be enhanced by restricting water flow. In moving bodies of water, use an application pattern that will provide a uniform distribution and avoid concentration of the herbicide.

EXHIBIT K-1
Page 4 of 4

Warranty Disclaimer

SePRO Corporation warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. SEPRO CORPORATION MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of SePRO Corporation or the seller. All such risks shall be assumed by Buyer.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at SePRO's election, one of the following:

(1) Refund of purchase price paid by buyer or use for product bought, or
(2) Replacement of amount of product used.

SePRO Corporation shall not be liable for losses or damages resulting from handling or use of this product unless SePRO Corporation is promptly notified of such loss or damage in writing. In no case shall SePRO Corporation be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of SePRO Corporation or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

Form No. A-72-MC-01(01)

Material Safety Data Sheet

SePRO

Emergency Phone: 317-580-8282
General Phone: 1-317-580-8282

EPA Reg. Number: 67690-4
Effective Date: August 25, 1994

SONAR* A.S. Herbicide

SePRO Corporation • Carmel, IN

1. INGREDIENTS: (% w/w, unless otherwise noted)

1-Methyl-3-phenyl-5-(3-(trifluoro-methyl)phenyl)-4 (1H)-pyridinone (Fluridone)
CAS# 059756-60-4.....41.7%

Other Ingredients, total, including: 58.3%
Proprietary surfactants
Propylene glycol . . . CAS# 000057-55-6
Water . . . CAS# 007732-18-5

This document is prepared pursuant to the OSHA Hazard ommunication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: (@ 1 atmosphere) 212°F, 100°C

VAP. PRESS: 2.3 mm Hg at 25°C

VAP. DENSITY: 1.178 relative to air at 25°C

SOL. IN WATER: Disperses in water

SP. GRAVITY: 1.15 at 25°C

APPEARANCE: Light tan to gray opaque liquid

ODOR: Slight odor

pH: (aqueous 50/50) 8.45

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: Greater than 200°F, 93.3°C

METHOD USED: SCC

FLAMMABLE LIMITS:
LFL: Not applicable
UFL: Not applicable

AUTO-IGNITION TEMPERATURE: Not applicable

EXTINGUISHING MEDIA: SONAR A.S. is a water based suspension and will not burn. If product is involved in fire and water has evaporated, use water fog, CO_2, dry chemical, or foam.

FIRE AND EXPLOSION HAZARDS: This product will not burn until a sufficient amount of water has evaporated. At this point, the product will exhibit the flammability characteristics of the organic portion of this formulation. Keep unnecessary people away; isolate hazard area and deny unnecessary entry. Highly toxic fumes are released in fire situations.

FIRE-FIGHTING EQUIPMENT: Wear positive-pressure, self-contained breathing apparatus and full protective equipment.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) None known

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) None known

HAZARDOUS DECOMPOSITION PRODUCTS: If product is allowed to dry, will emit toxic vapors as it burns.

HAZARDOUS POLYMERIZATION: Does not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ENVIRONMENTAL DATA: Follow use directions carefully so as to avoid adverse effects on nontarget organisms. In order to avoid impact on threatened or endangered aquatic plant or animal species, users must consult their state fish and game agency or the U.S. Fish and Wildlife Service before making applications. Do not contaminate water when disposing of equipment washwaters. Trees and shrubs growing in water treated with Sonar A.S. may occasionally develop chlorosis. Do not apply in tidewater or brackish waters. Lowest rates should be used in shallow areas where the water depth is considerably less than the average depth of the entire treatment site, for example, shallow shoreline areas.

ACTION TO TAKE FOR SPILLS: Use absorbent material to contain and clean up small spills and dispose as waste. Large spills report to CHEMTREC and SePro Corporation for assistance. Prevent runoff.

DISPOSAL METHOD: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

6. HEALTH HAZARD DATA:

EYE: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

SKIN CONTACT: Prolonged exposure may cause slight skin irritation. Did not cause allergic skin reactions when tested in guinea pigs.

SKIN ABSORPTION: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The LD50 for skin absorption in rabbits is greater than 2000 mg/kg.

*Trademark of SePRO Corporation

Material Safety Data Sheet

SePRO

Emergency Phone: 317-580-8282
General Phone: 1-317-580-8282

EPA Reg. Number: 67690-4
Effective Date: August 25, 1994

SONAR* A.S. Herbicide

SePRO Corporation • Carmel, IN

INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is greater than 500 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION: At room temperature, vapors are minimal due to physical properties; a single exposure is not likely to be hazardous.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: In chronic toxicity studies in animals, fluridone has been shown to cause liver and kidney effects.

CANCER INFORMATION: The components did not cause cancer in long-term animal studies.

TERATOLOGY (BIRTH DEFECTS): In animal studies on some of the components (including fluridone), this product did not cause birth defects; for fluridone, other fetal effects occurred only at doses toxic to the mother.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): For fluridone, results of mutagenicity tests in animals have been negative; results of a battery of in-vitro mutagenicity tests, except for one, have also been negative. Based on these results and the lack of carcinogenic response in long term studies, fluridone is not considered to be mutagenic.

7. FIRST AID:

EYES: Flush eyes with plenty of water. Get medical attention if irritation persists.

SKIN: Flush skin with plenty of water. Get medical attention if irritation persists.

INGESTION: Call a physician or poison control center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

INHALATION: Move victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): Propylene glycol: AIHA WEEL is 50 ppm total, 10 mg/m3 aerosol only.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. If respiratory irritation is experienced, use an approved air-purifying respirator.

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. Use chemically-resistant gloves when prolonged or frequently-repeated contact could occur. Wash thoroughly with soap and water after handling. Wash exposed clothing before reuse.

EYE PROTECTION: Use safety glasses.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Harmful if swallowed, absorbed through skin, or if inhaled. Avoid breathing of spray mist or contact with skin, eyes, or clothing.

MSDS STATUS: Revised sections 1, 3, 5, 6, 7, 8, 9, and reg sheet.

REGULATORY INFORMATION:

(Not meant to be all-inclusive—selected regulations represented).

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:
An immediate health hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in Section 1 of the MSDS.

Material Safety Data Sheet

SePRO

Emergency Phone: 317-580-8282
General Phone: 1-317-580-8282

EPA Reg. Number: 67690-4
Effective Date: August 25,1994

SONAR* A.S. Herbicide

SePRO Corporation • Carmel, IN

CHEMICAL NAME	CAS NUMBER	LIST
1,2-PROPANEDIOL	000057-55-6	PA1

PA1=Pennsylvania Hazardous Substance
(present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Category	Rating
Health	1
Flammability	0
Reactivity	0

The Information Herein Is Given In Good Faith,
But No Warranty, Express Or Implied, Is Made.
Consult SePRO Corporation For Further Information.

EXHIBIT K-3
Page 1 of 3

Specimen Label

SePRO

Sonar® SRP

Herbicide

A herbicide for management of aquatic vegetation in fresh water ponds, lakes, reservoirs, drainage canals, irrigation canals and rivers.

Active ingredient:
fluridone: 1-methyl-3-phenyl-5-[3-(trifluoromethyl) phenyl]-4(1H)-pyridinone.....5.0%
Inert ingredients..... 95.0%
Total.....100.0%

Contains 2 pounds active ingredient per 40-pound container.

Keep Out of Reach of Children
CAUTION

Refer to inside of label booklet for additional precautionary information and Directions for Use.

Notice: Read the entire label before using. Use only according to label directions. **Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" elsewhere on this label.**

In case of emergency endangering health or the environment involving this product, call collect 317-580-8282.

Specialty Chemical: Keep away from food, feedstuffs and water supplies.

EPA Reg. No. 67690-3 EPA Est. 39578-TX-1

900-003138

Trademark of SePRO Corporation
SePRO Corp. • Carmel, IN 46032 U.S.A.

Precautionary Statements

Hazards to Humans and Domestic Animals
Keep Out of Reach of Children

CAUTION

Harmful if Swallowed, Absorbed Through Skin, or if Inhaled

Avoid breathing of dust or contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Wash exposed clothing before reuse.

First Aid:

If in eyes: Flush eyes or skin with plenty of water. Get medical attention if irritation persists.
If swallowed: Call a physician or poison control center, drink one or two glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.
If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

Environmental Hazards

Follow use directions carefully so as to minimize adverse effects on nontarget organisms. In order to avoid impact on threatened or endangered aquatic plant or animal species, users must consult their State Fish and Game Agency or the U.S. Fish and Wildlife Service before making applications.

Do not contaminate water when disposing of equipment washwaters. Trees and shrubs growing in water treated with Sonar SRP may occasionally develop chlorosis. Do not apply in tidewater/brackish water.

Lowest rates should be used in shallow areas where the water depth is considerably less than the average depth of the entire treatment site, for example, shallow shoreline areas.

Directions for Use

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
Read all Directions Carefully Before Applying Sonar SRP.

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

Storage: Store in original container only. Do not store near feed or foodstuffs. In case of leak or spill, contain material and dispose as waste.

Sonar® SRP Herbicide

Pesticide Disposal: Wastes resulting from use of this product may be used according to label directions or disposed of at an approved waste disposal facility.
Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

General Information

Sonar SRP herbicide is a selective systemic aquatic herbicide for management of aquatic vegetation in fresh water ponds, lakes, reservoirs, drainage canals, irrigation canals, and rivers. Sonar SRP is a pelleted formulation containing 5% fluridone. Sonar is absorbed from water by plant shoots and from hydrosoil by the roots of aquatic vascular plants. It is important to maintain the recommended concentration of Sonar in contact with the weeds as long as possible. Rapid water movement or any condition which results in rapid dilution of Sonar in treated water will reduce its effectiveness. In susceptible plants, Sonar inhibits the formation of carotene. In the absence of carotene, chlorophyll is rapidly degraded by sunlight. Herbicidal symptoms of Sonar appear in seven to ten days and appear as white (chlorotic) or pink growing points. Under optimum conditions 30 to 90 days are required before the desired level of aquatic weed management is achieved with Sonar. Species susceptibility to Sonar SRP may vary depending on time of year, stage of growth and water movement. For best results, apply Sonar SRP prior to initiation of weed growth or when weeds begin active growth.

Sonar SRP is not corrosive to application equipment.

Special Use Precautions

Obtain Required Permits: Consult with appropriate state or local water authorities before applying this product. Permits may be required by state or local public agencies.

Potable Water Intakes: In lakes and reservoirs, do not apply Sonar SRP within one-fourth mile (1320 feet) of any functioning potable water intake. **Note: Existing potable water intakes which are no longer in use, such as those replaced by connections to potable water wells or a municipal water system, are not considered to be functioning potable water intakes.**

Irrigation:
Irrigation with Sonar SRP treated water may result in injury to the irrigated vegetation. SePRO recommends informing those who irrigate from Sonar SRP treated areas of the irrigation time frames presented in the table below. These time frames are suggestions which should be followed to reduce the potential for injury to vegetation irrigated with Sonar SRP treated water:

	Days After Application		
Application Site	Established Tree Crops	Established Row Crops/ Turf/Plants	Newly Seeded Crops/Seedbeds or Areas to be Planted Including Overseeded Golf Course Greens
[1]Ponds and Static Canals	7	30	30
Canals	7	7	30
Rivers	7	7	7
[2]Lakes and Reservoirs	7	7	7

[1]For purposes of Sonar SRP labeling, a pond is defined as a body of water 10 acres or less in size. A lake or reservoir is greater than 10 acres.

[2]In lakes and reservoirs where one-half or greater of the body of water is treated, use the pond and static canal irrigation restrictions.

Weed Control Information

Vascular Aquatic Plants Controlled by Sonar SRP:

Submersed Plants:
Bladderwort (*Utricularia* spp.)
Common coontail (*Ceratophyllum demersum*)
Common Elodea (*Elodea canadensis*)
Egeria, Brazilian Elodea (*Egeria densa*)
Fanwort, Cabomba (*Cabomba caroliniana*)
Hydrilla (*Hydrilla verticillata*)
Naiad (*Najas* spp.)
Pondweed (*Potamogeton* spp., except Illinois pondweed)
Watermilfoil *(Myriophyllum* spp.)

Shoreline Grasses:
Paragrass (*Brachiaria mutica*)

Vascular Aquatic Plants Partially Controlled by Sonar SRP:

Alligatorweed (*Alternanthera philoxeroides*)
American lotus (*Nelumbo lutea*)
Cattail (*Typha* spp.)
Creeping Waterprimrose (*Ludwigia peploides*)
Giant cutgrass (*Zizaniopsis miliacea*)
Illinois pondweed (*Potamogeton illinoensis*)
Parrotfeather (*Myriophyllum brasiliense*)
Reed Canarygrass (*Philaris arundinaceae*)
Smartweed (*Polygonum* spp.)
Spatterdock (*Nuphar luteum*)
Spikerush (*Eleocharis* spp.)
Southern watergrass (*Hydrochloa caroliniensis*)
Torpedograss (*Panicum repens*)
Waterlily (*Nymphaea* spp.)
Waterpurslane (*Ludwigia palustris*)
Watershield (*Brasenia schreberi*)

Vascular Aquatic Plants Not Controlled by Sonar SRP:

Algae *(Chara* and *Nitella*)
American frogbit (*Limnobium spongia*)
Arrowhead (*Sagittaria* spp.)
Bacopa (*Bacopa* spp.)
Big floatingheart, Banana Lily (*Nymphoides aquatica*)
Bulrush (*Scirpus* spp.)
Floating waterhyacinth (*Eichhornia crassipes*)
Maidencane (*Panicum hemitomon*)
Pickerelweed, lanceleaf (*Pontederia cordata*)
Rush (*Juncus* spp.)
Tapegrass, American Eelgrass (*Vallisneria americana*)
Waterlettuce (*Pistia stratiotes*)
Water pennywort (*Hydrocotyle umbellata*)

Application Directions

The aquatic plants present in the treatment site should be identified prior to application to determine their susceptibility to Sonar SRP. It is important to determine the area (acres) to be treated and the average depth in order to select the proper application rate. Do not exceed the maximum labeled rate for a given treatment site per annual growth cycle.

Application to Ponds

Sonar SRP may be applied to the entire surface area of a pond. Rates may be selected which are equivalent to addition of 0.06 to 0.09 ppm of active ingredient to the treated water, although actual concentrations in treated water may be substantially lower at any point in time due to the slow-release formulation of this product. Application rates of Sonar SRP necessary to obtain these active ingredient equivalents in treated water are shown in the following table. When average water depth of the treatment site is greater than 5 feet, apply 20 to 30 pounds of Sonar SRP per treated surface acre.

Average Water Depth of Treatment Site (feet)	Pounds of Sonar SRP per Treated Surface Acre
1	3.2 - 5
2	6.5 - 10
3	10 - 15
4	13 - 20
5	16 - 25

Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control species.

Application to Lakes and Reservoirs

For best results in lakes and reservoirs, Sonar SRP treatment areas should be a minimum of 5 acres in size. Treatment of areas smaller than 5 acres or treatment of narrow strips such as boat lanes or shorelines may not produce satisfactory results due to dilution by untreated water. In lakes and reservoirs, do not apply Sonar SRP within one-fourth mile (1320 feet) of any functioning potable water intake.

Rates may be selected which are equivalent to addition of 0.075 to 0.15 ppm of active ingredient to the treated water, although actual concentrations in treated water may be substantially lower at any point in time due to the slow-release formulation of this product. Application rates of Sonar SRP necessary to obtain these active ingredient equivalents in treated water are shown in the following table. When average water depth of the treatment site is greater than 10 feet, apply 60 to 80 pounds of Sonar SRP per treated surface acre.

Average Water Depth of Treatment Site (feet)	Pounds of Sonar SRP per Treated Surface Acre
1	4 - 8
2	8 - 16
3	12 - 24
4	16 - 32
5	20 - 40
6	24 - 48
7	28 - 56
8	32 - 64
9	36 - 72
10	40-80

Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control species.

Application Rate Calculation - Ponds, Lakes and Reservoirs

The amount of Sonar SRP to be applied to provide the desired ppm concentration of active ingredient equivalents in treated water may be calculated as follows:

- Pounds of Sonar SRP required per treated acre = Average water depth of treatment site **x** Desired ppm concentration of active ingredient equivalents **x** 54

For example, the pounds per acre of Sonar SRP required to provide a concentration of 0.075 ppm of active ingredient equivalents in water with an average depth of 5 feet is calculated as follows:

5 **x** 0.075 **x** 54 = 20 pounds per treated surface acre.

Note: Calculated rates should not exceed the maximum allowable rate in pounds per treated surface acre for the water depth listed in the application rate table for the site to be treated.

Application to Drainage Canals, Irrigation Canals and Rivers

In drainage canals, irrigation canals and rivers, Sonar SRP should be applied a the rate of 40 pounds per treated surface acre. Where water retention is possible, the performance of Sonar SRP will be enhanced by restricting water flow. In slow moving bodies of water, use an application pattern that will provide a uniform distribution and avoid concentration of the herbicide.

WARRANTY DISCLAIMER

SePRO warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. **SePRO makes no other express or implied warranty of merchantability or fitness for a particular purpose or any other express or implied warranty.**

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to the label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of SePRO or the seller. All such risks shall be assumed by the buyer.

LIMITATION OF REMEDIES

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at SePRO's election, one of the following:

(1) Refund of purchase price paid by buyer or user for product bought, or
(2) Replacement of amount of product used.

SePRO shall not be liable for losses or damages resulting from handling or use of this product unless SePRO is promptly notified of such loss or damage in writing. In no case shall SePRO be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of SePRO or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

EXHIBIT K-4
Page 1 of 2

Material Safety Data Sheet

SePRO

Emergency Phone: 317-580-8282
General Phone: 1-317-580-8282

EPA Reg. Number: 67690-3
Effective Date: August 25, 1994

SONAR* SRP Herbicide

SePRO Corporation • Carmel, IN

1. INGREDIENTS: (% w/w, unless otherwise noted)

1-Methyl-3-phenyl-5-(3-(trifluoromethyl)phenyl)-4(1H)-pyridinone (Fluridone)
CAS# 059756-60-4.....5%

Other Ingredients..... 95%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: Not applicable

VAP. PRESS: Not applicable

VAP. DENSITY: Not applicable

SOL. IN WATER: Insoluble, but disintegrates in water

SP. GRAVITY: Not applicable

APPEARANCE: Dark gray to dark brown pellet

ODOR: Faint musty odor

pH: (aqueous 50/50) 3.5

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: Not applicable

METHOD USED: Not applicable

FLAMMABLE LIMITS:
LFL: Not applicable
UFL: Not applicable

AUTO-IGNITION TEMPERATURE: No ignition up to 1382°F, 750°C

EXTINGUISHING MEDIA: Use water, CO2 or dry chemicals.

FIRE AND EXPLOSION HAZARDS: Will emit toxic vapors as it burns.

FIRE-FIGHTING EQUIPMENT: Wear full protective clothing and use self-contained breathing apparatus.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) None known

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) None known

HAZARDOUS DECOMPOSITION PRODUCTS: Will emit toxic vapors as it burns.

HAZARDOUS POLYMERIZATION: Does not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ENVIRONMENTAL DATA: Follow use directions carefully so as to minimize adverse effects on nontarget organisms. IN ORDER TO AVOID IMPACT ON THREATENED OR ENDANGERED AQUATIC PLANT OR ANIMAL SPECIES, USERS MUST CONSULT THEIR STATE FISH AND GAME AGENCY OR THE U.S. FISH AND WILDLIFE SERVICE BEFORE MAKING APPLICATIONS. Do not contaminate water by cleaning of equipment or disposal of wastes. Trees and shrubs growing in water treated with SONAR may be injured. Do not apply in tidewater or brackish water. Do not apply in lakes, ponds, or other bodies of water where crayfish farming is performed.

ACTION TO TAKE FOR SPILLS: Contain and sweep up material of small spills and dispose as waste. Large spills report to CHEMTREC and SePRO Corporation for assistance. Prevent runoff.

DISPOSAL METHOD: Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility in accordance with applicable regulations.

6. HEALTH HAZARD DATA:

ACUTE EXPOSURE (SONAR SRP)
Eyes - Rabbit, irritant
Skin - Rabbit, 2000 mg/kg, no deaths or toxicity, nonirritant
Inhalation - This formulation is not considered to be an inhalation hazard due to pelleted nature of material
Ingestion - Rat, 500 mg/kg, no deaths or toxicity
Sensitization - This formulation was not tested. Fluridone technical is not a contact sensitizer in guinea pigs.

CHRONIC EXPOSURE (Fluridone Technical) The following effects were reported in chronic, teratogenic, and reproductive toxicity studies in laboratory animals where experimental dosage levels and durations of exposure were far in excess of those likely to occur in humans.
Chronic Toxicity - Decreased survival in lifetime feeding study. Increased liver enzyme activity, liver weight, liver cell size, and microscopic liver cell changes.

*Trademark of SePRO Corporation

1

Material Safety Data Sheet

SePRO

Emergency Phone: 317-580-8282
General Phone: 1-317-580-8282

EPA Reg. Number: 67690-3
Effective Date: August 25, 1994

SONAR* SRP Herbicide

SePRO Corporation • Carmel, IN

Increased kidney weights, and microscopic kidney cell changes. Increased serum enzyme levels.
Teratology & Reproduction - Not teratogenic. Fetal deaths at maternally toxic doses. No effects on reproductive performance.
Mutagenicity - Not mutagenic in either bacterial or mammalian cells.
Carcinogenicity - Not listed as a carcinogen or potential carcinogen by IARC, NCI/NTP, OSHA, or ACGIH. Not considered to be carcinogenic in lifetime feeding studies.

SIGNS AND SYMPTOMS OF EXPOSURE: There are no reports of significant exposure to SONAR SRP. In two reports of children swimming in water treated with SONAR, no symptoms developed.

PRIMARY ROUTES OF ENTRY: Skin and inhalation.

7. FIRST AID:

EYES: Flush eyes with plenty of water and call a physician if irritation develops.

SKIN: Wash exposed areas with plenty of soap and water. Wash all contaminated clothing before reuse. Call a physician if irritation develops.

INGESTION: Do not induce vomiting. Call a physician or Poison Control Center. If available, administer activated charcoal (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

INHALATION: If discomfort occurs, move individual to fresh air. If breathing difficulty occurs, get medical attention. If not breathing, provide cardiopulmonary resuscitation assistance and get medical attention immediately.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: No information available.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): PEL and TLV not established.

VENTILATION: Good general ventilation should be sufficient for most conditions.

RESPIRATORY PROTECTION: No respiratory protection should be needed when used in accordance with label instructions.

SKIN PROTECTION: No precautions other than normal work clothing should be needed.

EYE PROTECTION: Use safety glasses.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Harmful if swallowed, absorbed through skin, or if inhaled. Avoid breathing of dust or contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Wash exposed clothing before reuse.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 704)
(4=Extreme; 3=High; 2=Moderate; 1=Slight; 0=Insignificant)
Health: 2 Flammability: 1 Reactivity: 0

SHIPPING REQUIREMENTS DOT Hazard Class: Not regulated.

MSDS STATUS: Revised 1/92, Section 8

REGULATORY INFORMATION:

(Not meant to be all-inclusive—selected regulations represented).

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:
An immediate health hazard

The Information Herein Is Given In Good Faith,
But No Warranty, Express Or Implied, Is Made.
Consult SePRO Corporation For Further Information.

Form No. A-73-MC-02(01)

Appendix L

Herbicide Treatment Protocols

Individual Treatment Protocols

Treatment protocols for each of the four proposed treatment methods, Reward, Sonar A.S., Sonar SRP, and Mechanical Harvesting are described below.

- **Reward**—this liquid herbicide will be applied from a boat by subsurface application through weighted hoses dragged below the water surface over the entire target area to be treated. The chemical application rate will be determined based on the level of infestation and will not exceed the maximum label rate of the chemical. Reward may be applied up to two times per year at a given site. The target water column concentration of diquat will be 0.5 ppm. To be effective, diquat requires a 3 to 6 hour contact time.
- **Sonar (A.S., liquid form)**—this liquid herbicide will be applied from a boat by subsurface application through weighted hoses dragged below the water surface over the entire target area to be treated. The chemical application rate will be determined based on the level of infestation and will not exceed the maximum label rate of the chemical. The DBW expects that one treatment of Sonar A.S. will be performed over a six to eight week period at a given site. A treatment will consist of 12 applications (two per week) at 0.2 ppm for each application. Between one and three treatments may be required per year. To be effective, Sonar requires a 4 to 6 week contact time.
- **Sonar (SRP, granular form)**—this granular herbicide will be broadcast over the treatment area from an airboat in a manner consistent with its labeling. The chemical application rate will be determined based on the level of infestation and will not exceed the maximum label rate of the chemical. Sonar SRP application rates will be similar to the Sonar A.S. rates identified above.

Appendix M

Management Plan

EDCP PROTOCOL

DBW personnel who apply aquatic herbicides will pass a Qualified Applicators Certificate test, category "F" (aquatics), administered by the Department of Pesticide Regulation (DPR). This test includes information on:

1. Reading and understanding pesticide labels
2. The proper methods of mixing and applying pesticides
3. Handling and disposing of pesticides and pesticide containers
4. Recognizing pesticide poisoning symptoms
5. The proper use of protective equipment
6. Other information related to proper pesticide handling and application.

With the successful completion of this test the applicator will receive a "Qualified Applicators Certificate" and be allowed to apply herbicides for the EDCP. DBW personnel in possession of this "Qualified Applicators Certificate" must complete 20 hours of continuing education per year (4 of which must be in laws and regulations) to retain possession of this certificate.

In addition herbicides will be managed as follows:

- All EDCP herbicides will be stored in a building away from people, living areas, food, animal feed, and animals. The area will be well ventilated, well lighted, dry, and secure. The door will be securely locked and a sign warning of the buildings contents will be posted at the entrance.
- An aquatic pest control supervisor will oversee operations of the program and make changes where necessary.
- All applicators will fill out a daily report at the end of each day. These reports will be kept on file at DBW headquarters and contain information such as:
    1. The date of the application
    2. The applicators name and address of department
    3. The amount of herbicide used
    4. The location of the treatment (site # and county)
    5. Total acres treated
    6. Any other pertinent information.

- Monthly Summary Pesticide Use Reports will be turned in to the County Agricultural Commissioners of the appropriate counties and contain the following information:
    1. The name and address of the person who applied the herbicides
    2. County where the control was performed
    3. Month and year of herbicide use
    4. Site treated
    5. Herbicide EPA registration number and the amount of herbicide used
    6. Number of applications made with each herbicide and the total number of applications during the month
    7. Total acres per pesticide used.

Appendix N

Komeen Labels and Material Safety Data Sheets

Appendix N includes the label and material safety data sheets for Komeen. **Exhibit N-1** is the label and **Exhibit N-2** is the material safety data sheet.

EXHIBIT N-1
Page 1 of 4

Griffin®

Komeen®

AQUATIC HERBICIDE

For use in Slow Moving or Quiescent Bodies of Water Including: Golf Course, Ornamental, Fish, and Fire Ponds; Fresh Water Lakes, Fish Hatcheries and Potable Water Reservoirs. Areas treated with Komeen may be used for fishing, swimming, drinking and watering livestock immediately after treatment.

ACTIVE INGREDIENT	
*Copper as elemental	8%
INERT INGREDIENTS	92%
TOTAL	100%

*Derived from Copper-Ethylenediamine Complex and Copper Sulfate Pentahydrate
One Gallon Contains 0.8 Pounds of Elemental Copper

KEEP OUT OF THE REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

For medical emergencies involving this product, call toll free 1-888-324-7598.

See Label for Additional Precautions and Directions for Use

GRIFFIN L.L.C.
VALDOSTA, GEORGIA 31601

Specimen Label

EPA REG. NO. 1812-312

EXHIBIT N-1
Page 2 of 4

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

CAUTION

Harmful if swallowed. Avoid contact with skin and eyes. Wash thoroughly with soap and water after handling. Do not apply this product in a manner as to directly expose workers or other persons.

ENVIRONMENTAL HAZARDS

This product may be toxic to fish. Trout and other species of fish may be killed at application rates recommended on this label. Generally, fish toxicity is reduced as water hardness increases. Consult State Fish and Game Agency before applying this product to public waters.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal. Store in a cool, dry place

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

GENERAL INFORMATION

Komeen provides effective control of Hydrilla (*Hydrilla verticillata*), Brazilian Elodea (*Egeria densa*), Southern/Northern Naiads (*Najas* sp.), Coontail (*Ceratophyllum demersum*), Elodea (*Elodea canadensis*), Water Lettuce (*Pistia stratiotes*) and Water Hyacinth (*Eichhornia crassipes*). Under certain water quality conditions, such as low water hardness, Komeen may also control Eurasian Watermilfoil (*Myriophyllum spicatum*), Sago Pondweed (*Potamogeton pectinatus*), and American Pondweed (*Potamogeton nodosus*). Komeen may be applied to slow moving or quiescent bodies of water including: potable water reservoirs and recreation lakes; golf course, ornamental, fish and fire ponds.

Komeen may be tank mixed with other herbicides, such as Diquat, Sonar and Endothall, for control of a broader weed spectrum (refer to the directions for use for specific directions). Refer to all precautions of products used with Komeen.

The effectiveness of Komeen is based upon its penetration into plant tissues; therefore, proper placement of the product is essential. When weeds are actively growing, apply Komeen to the area where the greatest concentration of foliage is located in a manner which will deposit the herbicide on leaf surfaces. The activity of Komeen may be reduced if silt or algae are present in the water or cover the weeds. If algae is present or covers the weeds, the effectiveness of Komeen may be improved by tank mixing with an algaecide, such as K-Tea .

Komeen may be applied by aircraft, sprayer or spray boat as a direct surface spray, direct subsurface spray through weighted hoses, invert emulsion, for polymer applications (see specific instructions and use chemicals cleared for application to growing crops) as appropriate. As a surface or subsurface application, Komeen may be diluted or applied directly undiluted, whichever is applicable to ensure uniform coverage of the area to be treated. Komeen requires a minimum of 12 to 24 hours of contact with the target weed in order to provide effective control.The aquatic weeds will drop below the surface within 3 to 7 days after treatment. Complete effect of the treatment will be observed within 4 to 6 weeks. In heavily infested areas, a second application after 12 weeks may be necessary.

Undiluted Komeen or concentrations above 1.0 ppm Cu^{++} may be injurious to crops, grass, ornamentals and other foliage. Do not apply in such a way that the concentrated product comes in contact with crops, ornamentals, grass or desirable plants. Apply only as specified on the label.

In areas heavily infested with aquatic weeds or if water temperature is high, treatment can result in oxygen loss from decomposition of dead vegetation. This loss can cause fish suffocation. To minimize this hazard, treat ⅓ to ½ of the water area in a single operation. Add only enough Komeen for the actual area being treated. Wait 10 to 14 days before treating the remaining area. Begin treatment along the shore and proceed outward in bands to allow fish to move into untreated areas.

Application Rates for Aquatic Weed Control in Quiescent or Slow Moving Water

Weed Pest	Copper Level Required For Control (ppm)*
Hydrilla verticillata (Hydrilla)	0.75 -1.0
Suppression of	
Eichhornia crassipes (Water Hyacinth)	0.75 -1.0
Egeria densa (Brazilian Elodea)	0.50 -0.75
Najas sp. (Southern/Northern Naiads)	0.50 -1.0
Ceratophyllum demersum (Coontail)	0.50 -1.0
Elodea canadensis (Elodea)	0.50 -1.0
*Myriophyllum spicatum*** (Eurasian Watermilfoil)	0.75 -1.0
*Potamogeton pectinatus*** (Sago Pondweed)	0.75 -1.0
*Potamogeton nodosus*** (American Pondweed)	0.75 -1.0
Pistia stratiotes (Water Lettuce)	0.75 -1.0

* Use lower rate in light infestations and higher rate for heavier infestations.

** Control only in low water hardness.

Application Rates Are Calculated by Using the Following Formula to Obtain the Appropriate Copper Concentration:

Desired Concentration of Cu^{++} (ppm) x Average Depth of Water (feet) x 3.34 = Gallons of Komeen Per Surface Acre

Do not apply more than 1.0 ppm copper.

METHODS OF APPLICATION

SPRAY BOAT

Direct Surface Application: Surface applications may be made near shorelines or in shallow water (4 feet or less).

Direct Subsurface Application: In deep water (4 feet or more), make a subsurface application of Komeen at recommended rates through weighted trailing hoses where the greatest concentration of foliage exists, and where deposit on leaf surfaces will be assured. Do not drag hoses on the bottom.

Invert Application: Komeen will invert easily using either tank mix or bi-fluid mixer techniques. Invert applications should be made through weighted hoses dragged below the surface of the water. The invert emulsion will form tiny droplets which will adhere to the submerged vegetation and release the herbicide in close proximity to the plant. Do not drag hoses on the bottom.

The emulsifier should release Komeen at a rate fast enough to be quickly absorbed by the plant tissue but not so fast that it can be washed away from the treatment area. The invert emulsion has a heavy viscous consistency much like mayonnaise.

Apply Komeen in an appropriate invert system. The ratios given below should be used only as a guide in the preparation of a Komeen invert emulsion. It is best to test the invert system to be used prior to application to ensure proper results. The tightness and weight of the invert may be altered by slight changes in the suggested ratios.

Approximate ratios for tank mix systems:

80 gallons water : 3 gallons invert oil : 8 gallons Komeen.

Approximate ratios for bi-fluid mixer systems:

60 gallons water : 3 gallons invert oil : 16 gallons Komeen.

For heavy growth, invert application may result in streaking effect due to localized control where the hoses were drug. For those areas, a direct application is preferred. Repeating an application of Komeen to a treated area within a short time after the first treatment may not increase effectiveness.

Polymer Application (Except CA): A polymer may be added to Komeen or a Komeen/Water premix to improve sinking, deposition and retention of the spray. Consult the manufacturer's recommendations regarding the use of a polymer for improved aquatic weed control.

SPRAY EQUIPMENT

Direct Surface Application: Surface application may be effective near shorelines or in shallow water.

Polymer Application (Except CA): Apply the recommended rate of Komeen in 100 to 400 gallons of total spray solution per surface acre. Add the recommended rate of sinking agent to the spray solution. Maintain constant agitation during addition of the polymer and continue through application. The polymer adheres to Komeen and forms strings that sink and stick to the aquatic vegetation. When treating slow moving water, the spray rig should move at a slow pace (4 to 5 mph) counter to the flow of water. Apply the spray solution to the area of densest foliage.

AIRCRAFT APPLICATION

Polymer Application (Except CA): Apply the recommended rate of Komeen in 20 gallons of total spray solution per surface acre. Add the recommended rates of a drift control or sinking agent to the spray solution. Maintain constant agitation during addition of the polymer and continue through application. When treating slow moving water, apply the spray solution counter to the flow of water.

TANK MIX

Komeen + Diquat Tank Mix: Komeen can be mixed with Diquat (diquat dibromide (1,2-a:2'1'-c) pyrazinediium dibromide 35.3%) and be applied by helicopter for control of Bladderwort, Curlyleaf Pondweed, Leafy Pondweed, Richardson Pondweed, Small Pondweed, Cattail, American Elodea, Duckweed, Water Lettuce, Eurasian Watermilfoil, Floatingleaf Pondweed, Coontail, Common Salvinia, Southern Naiad, Slender Naiad, Sago Pondweed, Pennywort, Hydrilla and Water Hyacinth in accordance with the more restrictive of the label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Mix 20 gallons of Komeen with 10 gallons of Diquat and 2 gallons of Nalquatic per 100 gallons of water. Apply at the rate of 20 gallons per acre (equivalent to 4 gallons Komeen, 2 gallons Diquat and 0.4 gallons Nalquatic per surface acre). Algae on the plant surface may interfere with uptake of herbicides; therefore, use K-Tea algaecide prior to this application to remove excess algae and improve control.

Komeen + Endothall Tank Mix (Except CA): Komeen can be mixed with Endothall [(dipotassium salt of endothall 10.1 - 40.3%) or (mono(N,N-dimethylalkylamine salt of endothall 53.0%)] and be applied as a uniform surface spray or injected under the waters surface for control of Najas Elodea, Coontail, Potamogeton, Milfoil, Zannichellia, Vallisneria, Cladophora, Pithophora, Spirogyra, Chara, American Pondweed and Sago Pondweed in accordance with the more restrictive of the label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Mix 20 gallons of Komeen with 15 gallons of Endothall in 100 gallons of water. Apply at the rate of 20 gallons per surface acre (equivalent to 4 gallons Komeen, 3 gallons Endothall). Algae on the plant surface may interfere with uptake of herbicides; therefore, use K-Tea algaecide prior to this application to remove excess algae and improve control.

Komeen + Sonar A.S. Tank Mix (Except CA): Komeen can be mixed with Sonar A. S. (fluridone 41.7%) and be applied as a uniform surface spray or injected under the water's surface for control of Common Duckweed, Spatterdock, Bladderwort, Fanwort (Cabomba), Watermilfoil, Paragrass, Common Elodea, Brazilian Elodea, Najas Elodea, Naiad, Coontail, American Pondweed and Sago Pondweed in accordance with the more restrictive of the label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Mix 20 gallons of Komeen with 1.5 quarts of Sonar A.S. in 100 gallons of water. Apply at the rate of 20 gallons per surface acre (equivalent to 4 gallons Komeen, 0.3 quarts Sonar A.S.). Algae on the plant surface may interfere with uptake of herbicides; therefore, use K-Tea algaecide prior to this application to remove excess algae and improve control.

WARRANTY STATEMENT

GRIFFIN warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials or the manner of use or application, all of which are beyond the control of GRIFFIN. In no case shall GRIFFIN be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price paid for this product or at GRIFFIN'S election, the replacement of this product. GRIFFIN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

Griffin

MATERIAL SAFETY DATA SHEET

Page 1 of 5

Komeen®

Date Prepared: September 3, 1997

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFICATION

Product Name:	Komeen®

HAZARDS CLASSIFICATION (0-minimal, 1-slight, 2-moderate, 3-serious, 4-severe)

NFPA:	HEALTH-2 FIRE-1 REACTIVITY-0
HMIS:	HEALTH-2 FIRE-1 REACTIVITY-0

MANUFACTURER

Company Name:	Griffin Corporation
Address:	PO Box 1847, Rocky Ford Road Valdosta, GA 31603-1847

EMERGENCY PHONE NUMBERS

Griffin Corporation:	(800) 237 1854
Chemtrec:	(800) 424 9300

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Component Name	% by Wt.	CAS#	ACGIH TLV	OSHA PEL
Elemental Copper *	8%	Not available	Not determined	Not determined
Inert ingredients	92%			

*derived from copper-ethylenediamine complex and copper sulfate pentahydrate.
Components not precisely identified are proprietary or not hazardous.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Dark Purple liquid that may cause moderate irritation to the eyes and skin. See below for route-specific details.

POTENTIAL HEALTH EFFECTS

Inhalation:	Toxic if inhaled.
Eye Irritation:	Considered to be a moderate irritant. Avoid eye contact with the product by using chemical safety glasses or goggles. May cause redness, swelling, and discharge, but is reversible.
Skin Irritation:	Slight skin irritant.
Skin Absorption:	Slightly toxic dermally.
Ingestion:	Moderately toxic by ingestion.

Griffin

MATERIAL SAFETY DATA SHEET

Komeen®

Date Prepared: September 3, 1997

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth. Get professional medical attention.
Eye Contact:	Hold eyelids open and flush with water for 15-20 minutes until no evidence of chemical remains. Get professional medical attention if irritation persists.
Skin Contact:	Remove contaminated clothing and shoes. Wash with plenty of soap and water for 15-20 minutes until no evidence of chemical remains. Get professional medical attention if irritation persists.
Ingestion:	If ingested, contact physician or call Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point & Method:	Not determined
Flammable Limits:	Not determined
Autoignition Temperature:	Not determined

FIRE FIGHTING HAZARDS & PROCEDURES

General Hazard:	Prevent human exposure to fire, smoke, fumes or products of combustion.
Extinguishing Media:	Not determined
Fire Fighting Equipment:	Wear protective clothing and self-contained breathing apparatus.
Hazardous Combustion Products:	Decomposes above 200°C.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Cover the spill with an absorbent material such as sweeping compound or lime. Sweep up and place in suitable (fiberboard) containers for later disposal.

7. HANDLING AND STORAGE

Storage Temperature:	Store below 35°C (95°F). Decomposes above 200°C. Average shelf life under proper storage conditions is 2 years.
General Information:	Store in a clean, dry area. Do not store near feed, food or within the reach of children.

Griffin

MATERIAL SAFETY DATA SHEET

Komeen®

Date Prepared: September 3, 1997

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Ventilation:	Provide local exhaust ventilation and/or general dilution ventilation to meet published exposure limits.
Respiratory Protection:	Wear dual cartridge respirator for dusts and mists.
Eye Protection:	Wear protective eyewear to prevent contact with this substance.
Protective Clothing:	Wear rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure:	No appreciable vapor pressure. Open containers can lose small amounts of water by volatilization.
Density:	1.22
Solubility in Water:	Soluble in water and alcohols.
pH:	9.62
Boiling Point:	215°F. Loses water and decomposes at high temperatures.
Melting Point:	Not determined
Odor:	Odorless
Color:	Dark purple
Physical State:	Liquid

10. STABILITY AND REACTIVITY

General:	This material is stable under normal conditions.
Conditions to Avoid:	Should not be used where pH of water is below 6 due to the possibility that the copper chelate may dissociate and release copper ions which could subsequently be precipitated as insoluble copper salts. Should not be applied when water temperature is below 60°F.
Hazardous Decomposition:	Decomposes above 200°C.
Hazardous Polymerization:	Material is not known to polymerize.

11. TOXICOLOGICAL INFORMATION

ACUTE

Inhalation:	Acute inhalation LC_{50} = 0.81 mg/L (rat - 4 hour).
Eye Irritation:	Considered to be a moderate irritant. Avoid eye contact.
Skin Irritation:	Considered to be a slight irritant to the skin. Material is a non-sensitizer to the skin.
Skin Absorption:	Acute dermal LD_{50} > 2,000 mg/kg.
Ingestion:	Oral LD_{50} = 498 mg/kg.

Griffin

MATERIAL SAFETY DATA SHEET

Komeen®

Date Prepared: September 3, 1997

12. ECOLOGICAL INFORMATION

For detailed ecological information, write to the address listed in Section 1 of this MSDS or call 912/242-8635 and ask for Regulatory Affairs.

13. DISPOSAL CONSIDERATIONS

Comply with appropriate disposal regulations. Landfill solids at permitted sites. Use registered transporters.

14. TRANSPORT INFORMATION

Department of Transportation (DOT) / International Air Transport Association (IATA) / International Maritime Organization (IMO):

Classification:	Copper Based Pesticide, Liquid, Toxic (Copper-Ethylenediamine Complex 8%)
Class:	6.1
Identification Number:	UN 3010
Packing Group:	III

15. REGULATORY INFORMATION

OSHA:	This product is considered hazardous under the OSHA Hazardous Communication Standard 29 CFR 1910.1200.
TSCA:	All product components are on the TSCA Chemical Inventory.
CERCLA:	Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to the state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.
RCRA:	When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrositivity, or reactivity, and is not listed in 40 CFR 261.33.
SARA TITLE III	
311/312 Hazard Categories:	This product has been reviewed according to the EPA "Hazard Categories" and is categorized as an acute health hazard (40 CFR 370.41).
313 Reportable Ingredients:	This product does not contain any material listed in Section 313 above de minimis concentrations.

Griffin

MATERIAL SAFETY DATA SHEET

Page 5 of 5

Komeen®

Date Prepared: September 3, 1997

16. OTHER INFORMATION

REVISION SUMMARY

This Material Safety Data Sheet replaces the one dated 06/20/96. Revisions have been made in the following sections: 2.

Komeen® is a registered trademark of Griffin Corporation.

The information in this MSDS relates to this specific material. It may not be valid for this material if used in combination with any other materials or in any process. It is the users' responsibility to satisfy themselves as to the suitability and completeness of this information for their own particular use.

Griffin Corporation • PO Box 1847, Rocky Ford Road, Valdosta, GA 31603-1847 • (800) 237-1854

Appendix O

Egeria densa Control Program Pre-Treatment, Treatment, and Post-Treatment Phases

Exhibit O-1, on the following page, summarizes the process and outcomes of the three phases of the EDCP. The three phases include the pre-treatment, treatment, and post-treatment phases. Exhibit O-1 summarizes the methodology for ranking and selecting sites, selecting methods for these sites, performing the treatment, and measuring and reporting the project outcomes.

Egeria densa Control Program Pre-Treatment, Treatment, and Post-Treatment Phases

	Pre-Treatment		Treatment	Post-Treatment
Process	***Project Area Survey and Primary Site Evaluation***	***Secondary Site Evaluation***		
	❑ Measure the degree of the navigational impairment using aerial and field surveys; estimate *Egeria* biomass ❑ Evaluate the significance of the navigational impairment by analyzing survey data and other available information (e.g., provided by stakeholders) ❑ Consider if the site is suited for available treatment method	❑ For each potential treatment site selected, evaluate the following indicators: *Biological* Presence of sensitive species *Chemical* Chemical levels in sediment, Chemical levels in water column, Dissolved oxygen, Water hardness, Water pH *Human-Related* Proximity to agricultural irrigation, *Egeria* disposal capability, Presence of human-made structures, Proximity to municipal water supply, Recreation activity, Site access *Physical* Water flows, Water temperature, Water turbidity	❑ Evaluate physical indicators at the site including: • Day length • Precipitation • Recreation activity • Sunlight • Tidal water exchange • Volume of vessel traffic • Water depth • Water flows • Water turbidity • Wind	❑ Monitor environmental impacts and efficacy of treatment using the following indicators: • Egeria biomass • Chemical levels in sediment • Chemical levels in water column • Dissolved oxygen • Egeria fragment levels • Impacts to sensitive fish species • Impacts to plant species • Impacts to wildlife species
Outcome(s)	❑ **Rank** potential Egeria densa treatment **sites** ❑ **Select potential sites** to treat	❑ **Select** the most efficacious treatment **methods** with the least environmental impact(s) from the available treatment options	❑ Determine appropriate timing and logistics for the selected treatment method ❑ **Perform** the *Egeria densa* **treatment**	❑ **Measure** the environmental impacts and efficacy of the treatment method. Evaluate and analyze data and findings. Modify future treatment methods, if necessary ❑ Report monitoring results to appropriate regulatory agencies and stakeholders.

EXHIBIT O-1

Appendix P

Day of Treatment Indicators

Should the DBW identify a treatment indicator at the time of the proposed treatment that could result in reduced control efficacy and/or heightened environmental impacts, the DBW would reschedule the treatment, or select another control method or site. **Exhibit P-1**, on the following page, titled "*Egeria densa* Treatment Decision-Making Matrix," demonstrates that these indicators may either: 1) restrict treatment logistics and timing for most sites, 2) restrict treatment logistics and timing for some sites, or 3) not restrict treatment logistics and timing. **Exhibit P-2**, following Exhibit P-1, defines these treatment indicators.

Once a control method is selected, the DBW will make all necessary notifications to regulatory agencies, stakeholders, and the public. Selected public and private entities (to be determined) will be notified in advance of the treatment date.

EXHIBIT P-1

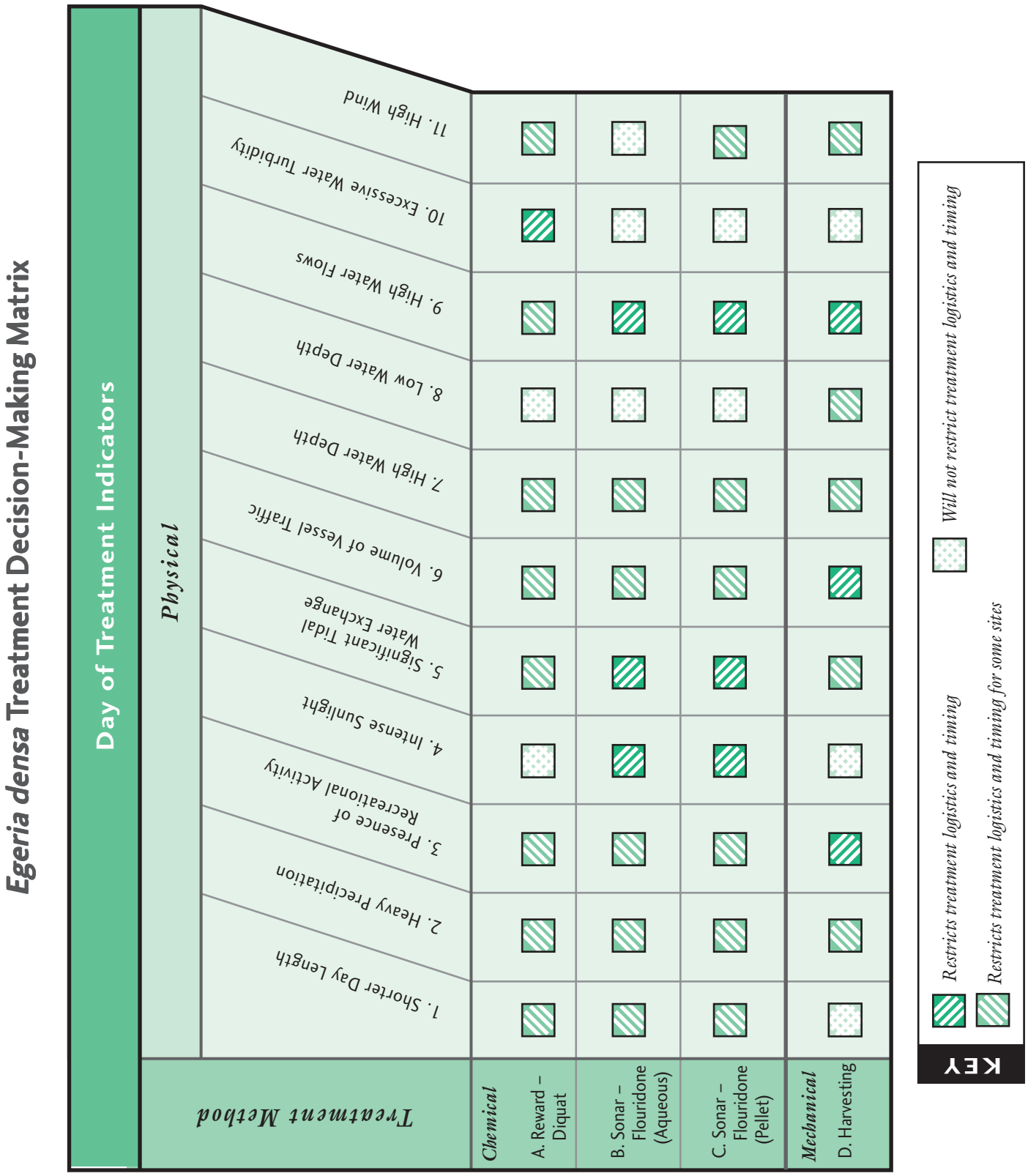

Egeria densa Treatment Decision-Making Matrix
Day of Treatment Indicators
Physical
Treatment Method
1. Shorter Day Length
2. Heavy Precipitation
3. Presence of Recreational Activity
4. Intense Sunlight
5. Significant Tidal Water Exchange
6. Volume of Vessel Traffic
7. High Water Depth
8. Low Water Depth
9. High Water Flows
10. Excessive Water Turbidity
11. High Wind
Chemical
A. Reward – Diquat
B. Sonar – Flouridone (Aqueous)
C. Sonar – Flouridone (Pellet)
Mechanical
D. Harvesting
KEY
Restricts treatment logistics and timing
Restricts treatment logistics and timing for some sites
Will not restrict treatment logistics and timing

EXHIBIT P-2

Egeria densa Day of Treatment Indicators

	Indicator	Issue of Concern
Physical	1. *Day Length*	A shorter day results in less direct irradiation on these plants, thus limiting their ability to metabolize the herbicide.
	2. *Precipitation*	Heavy rainfall during treatment can interfere with the logistics of treatment methods.
	3. *Recreational Activity*	Recreational activities present during the expected treatment period can interfere with weed control activities.
	4. *Intense Sunlight*	High sunlight conditions can breakdown the composition and effectiveness of chemicals.
	5. *Tidal Water Exchange*	High or low tide (water depth) can limit the effectiveness of chemical application or accessibility of harvesting equipment.
	6. *Vessel Traffic*	A high volume of vessel traffic can limit access to a site or can interfere with application of chemicals.
	7. *Water Depth*	Deep water (i.e., due to tidal influence and/or channel depth) can limit the ability of the herbicide to stay in contact with the plant. Low water depth can restrict access of mechanical harvesting equipment.
	8. *Water Flow*	High water flow conditions can reduce the effectiveness of chemicals and make mechanical harvesting difficult.
	9. *Water Turbidity*	Decreased water clarity due to soil, organics, or microorganisms in the water column. Diquat binds with organic material in the water.
	10. *Wind*	High wind conditions, can make treatment problematic.

Appendix Q

Description of Pre-Treatment Monitoring Indicators

Biological Indicators

The DBW would vary the selection of the method and timing of control treatments based on presence of threatened, endangered, and other special status species. The DBW would contract with qualified personnel to conduct surveys to determine the presence of sensitive fish, wildlife, and plant species in and near proposed treatment sites during periods of projected *Egeria* control activities. Control methods would be chosen to pose the least degree of impact to sensitive species found in or near the proposed treatment site.

Any *Egeria* treatment could have an adverse impact on threatened or endangered species found in a treatment area. Treatment of any area in which sensitive species are found would be contingent upon full compliance with the regulatory requirements identified by the USFWS, NMFS, and CDFG.

Further, if Interagency Ecological Program (IEP) Real Time Monitoring data is available and relevant to the treatment site in question, these data will be obtained and evaluated to determine whether any sensitive fish species have been identified in the treatment area. For example, presence of the delta smelt in a waterway proposed for *Egeria* control treatments would cause the DBW to postpone treatments until delta smelt no longer inhabit the location.

Surveys for threatened and endangered wildlife species in and near the treatment site also would be conducted by a qualified biologist following an established protocol. Sensitive wildlife species may be adversely affected by movement of mechanical harvesting machinery in and near a treatment site. If mechanical harvesting is considered a potential treatment, site surveys for sensitive terrestrial plant species would be conducted in the treatment area by a qualified botanist. Sensitive terrestrial plant species also may be adversely impacted by movement of mechanical harvesting conveyor machinery on shores adjacent to the treatment site or by placement of fragments at the disposal site.

Egeria biomass would be estimated at a representative number of sites by a qualified biologist following the protocol established by Obrebski, et al. (1998). The biomass estimate would be used to determine the treatment intensity and to later evaluate treatment efficacy.

Chemical Indicators

Low dissolved oxygen, excessive water hardness, high or low water pH, or low water temperature would restrict the method and timing of *Egeria* control treatments. These factors can reduce the effectiveness of a herbicide and possibly cause or heighten environmental impacts. The DBW would apply herbicides during times of the year when chemical and other indicators reveal that the control method would have the greatest probability of producing the desired toxic effect on *Egeria* while minimizing impacts to non-target organisms.

Low dissolved oxygen (less than 5 mg/L) can be problematic for fish and other aquatic organisms, as well as for aerobic decomposition of detritus. Chemical treatments likely would lower ambient dissolved oxygen concentrations at treatment sites. As treated plant material decomposes, biochemical oxygen demand levels increase and dissolved oxygen levels decrease. Biota at sites that have low ambient dissolved oxygen concentrations prior to treatment could be impacted by further decreases in dissolved oxygen levels.

Water temperature is another factor to consider when selecting the method, level, and timing of chemical control treatments. Low water temperatures decrease the effectiveness of Diquat and Sonar, due to reductions in plant metabolism (i.e., photosynthesis and respiration) and growth. Low water temperatures decrease a plant's metabolic rate. Hence the speed at which a herbicide enters the plant and is transported to its site of activity also is decreased. Low water temperatures would decrease the effectiveness of the herbicides proposed for use. A decrease in chemical efficacy could be expected when water temperatures fall below 50 to 60 degrees Fahrenheit.

Water temperatures in the Delta would likely be adequate for effective herbicide treatment from late spring through early fall. Water temperature may be too low for effective treatment from late fall through early spring.

Human-Related Indicators

The status of human-related indicators such as proximity to agricultural irrigation, *Egeria* disposal capability, presence of human-made structures, proximity to municipal water supply, intensive recreation, and limited site access would influence the method and timing of *Egeria* control treatments throughout the project area.

Human-made structures, such as docks, moorings, and sunken vessels, located in the waterways of the project area would play a role in determining the most suitable control method for a particular treatment site. These structures can severely restrict maneuverability of mechanical weed harvesting

boats and their ability to cut and remove plant material. They likely would have little or no effect on the smaller craft used for applying herbicides. Recreation activity (e.g., boating, swimming, fishing, and water skiing) in the project area also would influence the selection and timing of a treatment method.

Water flowing through sloughs and channels of the Sacramento-San Joaquin Delta is diverted for agricultural irrigation and municipal water uses throughout much of the year. These water use activities would influence the selection and timing of *Egeria* control methods. Agricultural irrigation likely would coincide with proposed *Egeria* control treatments at various locations throughout the project area. Mechanical harvesting generates plant fragments, which can clog water intake structures used by agricultural and municipal water users.

Diquat and Sonar can adversely impact certain agricultural crops and municipal water supplies. If a proposed chemical treatment of *Egeria* would prevent the timely irrigation of a nearby crop, the DBW would either postpone the treatment, substitute another chemical treatment method, or use mechanical harvesting. The DBW would not use herbicides at a treatment site if their application would have significant adverse impacts to irrigation and municipal water supplies in the area.

The DBW would consider recreational activity in the proposed treatment area regardless of the treatment method selected. All proposed treatment methods could interfere with recreational activities or pose a threat to the safety of individuals who are recreating.

Physical Indicators

Water flow would be measured with a flow meter. Information on residence time and the influence of tidal water exchange as it relates to the herbicide application would be gathered using a Rhodamine dye test. In this test, Rhodamine WT dye is injected into the water column and monitored closely to determine water movement and water exchange. Monitoring dye movement and dilution can provide a good estimate of where a herbicide may move and how fast it will be diluted. Thus, this test can help determine in advance the most effective treatment frequency and formulation. This test also can help determine destinations of floating fragments.

Net water flow and tidal water exchange determine the length of time that a herbicide will remain in the treatment area once injected into the water column. High flows and large-volume tidal water exchange can drastically dilute the ambient concentration of an applied chemical. Additionally, these factors can significantly decrease the amount of time a herbicide is in contact

with plants. Thus, high flows and large-volume tidal water exchange can significantly decrease the efficacy of a chemical treatment.

Flow is of particular concern when using Sonar, since the effectiveness of this chemical depends on long-term exposure of the chemical to the target plant (3 to 6 weeks at 10 to 20 ppbw). Thus, Sonar is usually not effective under high flow conditions.

The DBW would measure turbidity in the field. Diquat readily binds to suspended particles in the water column and becomes biologically unavailable for uptake by aquatic organisms, including plants. Thus, turbidity decreases the effectiveness of diquat. Diquat is not effective when turbidity increases significantly above normal levels.

Wind speed will be assessed through casual observation. High velocity winds can increase turbidity by causing waves and turbulence, thus suspending particulate matter, most notably detritus and light-weight sediments. Increased turbidity can decrease the effectiveness of diquat, which will bind to suspended particles and become biologically unavailable. High winds may also result in increased mixing, which could potentially decrease the effectiveness of certain herbicides through dilution.

Light intensity during the particular time of year when treatment is proposed will be assessed through casual observation. High solar irradiance can shorten the half-life of Sonar. Thus, Sonar may be more effective during winter and fall.

Appendix R

Special Status Species in the Delta

Exhibit R-1, on the following pages, identifies the special status species present in the Delta region. The common and scientific name, the status (both federal and state), a description of the habitat, and an indication of whether the species could potentially be impacted are presented for each species. This exhibit is organized into the following categories:

- Plants
- Invertebrates
- Fish
- Wildlife – Amphibians
- Wildlife – Reptiles
- Wildlife – Birds
- Wildlife – Mammals.

Many of these species are not affected by the proposed project (i.e., EDCP and Two-Year Komeen Trials). Those species that are affected are described in more detail in Chapter 2, the Environmental Setting, and in the discussion of impacts in Chapters 3 and 4.

Summary of Special Status Species in the Delta

Species			Description of Habitat	Species Potentially Impacted?	
Common Name	*Scientific Name*	Status		Yes	No
Plants					
Adobe lily	*Fritillaria pluriflora*	FSC	Chaparral, cismontane woodland, valley and foothill grassland.		x
Alkali milk-vetch	*Astragalus tener var. tener*	FSC, List 1B	Playas, valley and foothill grasslands and vernal pools.		x
Antioch Dunes evening-primrose	*Oenothera deltoides ssp. howellii*	SE, FE	Inland dunes. Native populations occur at the Antioch Dunes, along the San Joaquin River. Introduced populations established on islands in the western Delta.		x
Antioch Dunes evening-primrose crit. hab.	*Oenothera deltoides ssp. howellii*	FE	Inland dunes.		x
Brewer's dwarf-flax	*Hesperolinon breweri*	FSC	Upland (chaparral, foothill woodland, valley grassland).		x
Brittlescale	*Atriplex depressa Jeps.*	FSC, CNPS List 1B	Chenopod scrub, valley foothills and grasslands, playas. Known from upland areas surrounding the Delta. Occurs at the margins of Suisun Marsh.		x
Caper-fruited tropidocarpim	*Tropidocarpum capparideum*	FSC	Historical occurences from the south Delta. Currently presumed extinct. Occurred in valley and foothill grasslands, alkaline hills.		x
Carquinez goldenbush	*Isocoma arguta*	FSC	Valley foothills and grasslands. Known from Suisun Marsh.		x
Colusa grass	*Neostapfia colusana*	SE, FT	Vernal pools.		x
Contra Costa goldfields	*Lasthenia conjugens*	FE	Valley foothills and grasslands, vernal pools. Known from upland habitats surrounding the Delta, including the margins of the Suisun Marsh.		x
Contra Costa wallflower	*Erysium capitatum var. angustatum*	SE, FE	Inland dunes. Occurs along the San Joaquin River near Antioch.		x
Delta mudwort	*Limosella subulata*	CNPS List 2	Riparian scrub and both freshwater and brackish marshes. Populations known from the Delta and Suisun Marsh.	x	
Delta tule-pea	*Lathyrus jepsonii var. jepsonii*	FSC, CNPS List 1B	Freshwater/brackish marshes and swamps. Occurs at scattered locations throughout the Delta, Suisun Marsh, Suisun Bay and San Pablo Bay.	x	
Diablo helianthella (rock-rose)	*Helianthella castanea*	FSC	Broadleaf and upland forest, chapparal, cismontane woodland, coastal scrub, riparian woodland, and valley foothill grassland. Project will not affect these habitats.		x
Diamond-petaled poppy	*Eschscholzia rhombipetala*	FSC	Occurs in valley and foothill grasslands, with clay soils.		x
Ferris' milk vetch	*Astragalus tener var. ferrisiae*	FSC	Vernally mesic medows, valley foothills and grasslands. Known from upland areas surrounding the Delta.		x
Fleshy owl's-clover	*Castilleja campestris ssp. succulenta*	SE, FT	Vernal pools.		x
Gairdner's yampah	*Perideridia gairdneri ssp. gairdner*	FSC	Broadleaf and upland forest, chapparal, valley foothills and grasslands, vernal pools.		x

Summary of Special Status Species in the Delta

Species			Description of Habitat	Species Potentially Impacted?	
Common Name	*Scientific Name*	Status		Yes	No
Heartscale	*Atriplex cordulata*	FSC	Chenopod scrub, valley foothills and grasslands.		x
Hispid bird's-beak	*Cordylanthus mollis ssp. hispidus*	FSC	Alkali meadow. Known from upland habitats surrounding the Delta.		x
Large-flowered fiddleneck	*Amsinckia grandiflora*	SE, FE	Blue oak woodland and valley and foothill grassland.		x
Large-flowered fiddleneck critical habitat	*Amsinckia grandiflora critical habitat*	FE			x
Legenere	*Legenere limosa*	FSC	Vernal pools.		x
Little mousetail	*Myosurus minimus ssp. apus*	FSC	Vernal pools.		x
Mason's lilaeopsis	*Lilaeopsis masonii Math and Const.*	FSC, SR, CNPS List 1B	Marshes and swamps (brackish and freshwater) and riparian scrub. Occurs throughout the Delta.	x	
Northern California black walnut	*Juglans californica Wats. var. hindsii Jeps.*	FSC, CNPS List 1B	Riparian forest and riparian woodland. Scattered walnut trees occur throughout Delta.	x	
Palmate-bracted bird's-beak	*Cordylanthus palmatus*	SE, FE, CNPS List 1B	Chenopod scrub, valley and foothill grassland. Known from upland habitats surrounding the Delta.		x
Recurved larkspur	*Delphinium recurvatum*	FSC	Chenopod scrub, Cismontane woodland, valley foothills and grasslands. Known from upland habitats surrounding the Delta.		x
Rose mallow	*Hibiscus castanea*	CNPS List 2	Freshwater marshes and swamps. Known from the Delta and Sacramento River.	x	
Showy indian clover			Valley, foothill grasslands in heavy soils.		x
Slender Orcutt grass	*Orcuttia tenuis*	SE, FT	Annual grass found in vernal pools.		x
Slough thistle	*Cirsium crassicaule*	FSC	Chenopod scrub, marshes and swamp (sloughs), and riparian scrub. One historic occurrence known from south Delta. Generally not expected in the Delta due to habitat conversion.		x
Soft bird's-beak	*Cordylanthus mollis ssp. mollis*	SR, FE	Coastal salt marshes. Not expected. No suitable habitat occurs in the project area.		x
Solano grass	*Tuctoria mucronata*	FE	Vernal pools.		x
Suisun Marsh aster	*Aster lentus Greene*	FSC, CNPS List 1B	Marshes and swamps (brackish and freshwater). Known from Suisun Marsh and scattered locations throughout the Delta.	x	
Suisun thistle	*Cirisium hydrophilum var. hydrophilum*	FE	Found in salt marshes. Known to occur in Suisun Marsh.		x
Tiburon paintbrush	*Castilleja affinis ssp. neglecta*	ST, PE	Valley/foothill grasslands.		x
Valley sagittaria	*Sagittaria sanfordii*	FSC	Shallow freshwater marsh.	x	
Valley spearscale	*Atriplex joaquiniana*	FSC	Chenopod scrub, alkali meadows, and alkali flats. Known from upland areas surrounding the Delta. Occurs at the margins of Suisun Marsh.		x

Summary of Special Status Species in the Delta

Species			Description of Habitat	Species Potentially Impacted?	
Common Name	*Scientific Name*	Status		Yes	No
Invertebrates					
Antioch cophuran robberfly	*Cophura hurdi*	FSC	Relict habitat loose sandy soil, located in Antioch Dunes. Known only from the Antioch Dunes.		x
Antioch Dunes anthicid beetle	*Anthicus antiochensis*	FSC	Loose and sandy soil (relict dunes, disturbed sandy areas). Very unlikely in Delta, due to lack of suitable habitat.		x
Antioch efferian robberfly	*Efferia antiochi*	FSC	Relict habitat loose sandy soil, dunes.		x
Antioch mutillid wasp	*Myrmosula pacifica*	FSC	Open arid areas. Known only from Antioch Dunes. Considered Extinct.		x
Antioch sphecid wasp	*Philanthus nasilis*	FSC	Barren sandy areas in proximity to flowering plants. Known only from Antioch Dunes. Possible throughout Delta.		x
California freshwater shrimp	*Syncaris pacifica*	SE, FE	Vernal pools and swails.		x
California linderiella	*Linderiella occidentalis*	FSC	Vernal pools.		x
Callippe silverspot butterfly	*Speyeria callippe callippe*	FSC	Grasslands in the San Francisco Bay Area.		x
Ciervo aegialian scarab beetle	*Aegialia concinna*	FE	Delta and inland dune systems.		x
Conservancy fairy shrimp	*Branchinecta conservatio*	FE	Vernal swales and pools. Potential habitat occurs in Delta.		x
Curved-foot hygrotus diving beetle	*Hygrotus curvipes*	FSC	Various seasonal wetlands, vernal swales, and pools fringed with alkali deposits. Known from Oakley and Contra Costa County.		x
Delta green ground beetle	*Elaphrus viridis*	FT	Vernal pools. Occurs only at the Jepson Prairie Reserve in Solano County. Not expected at other locations within the Delta.		x
Delta green ground beetle critical habitat	*Elaphrus viridis critical habitat*	FT			x
Hurd's metapogon robberfly	*Metapogon hurdi*	FSC	Relict dune habitat, loose sandy soil. Known only from Antioch and Fresno. Very unlikely in Delta due to lack of suitable habitat.		x
Lange's metalmark butterfly	*Apodemia mormo langei*	FE	Shrubs associated with loose sand. Known only from Antioch Dunes.		x
Longhorn fairy shrimp	*Branchinecta longiantenna*	FE	Vernal swales and pools. Potential habitat occurs in Delta.		x
Middlekauf's shieldback katydid	*Idiostatus middlekaufi*	FSC	Shrubs associated with loose sand. Potentially occurs throughout the Delta region.		x
Molestan blister beetle	*Lytta molesta*	FSC	Grasslands and vernal pools.		x
Ricksecker's water scavenger beetle	*Hydrochara rickseckeri*	FSC	Aquatic; known from San Francisco Bay Area.		x
Sacramento anthicid beetle	*Anthicus sacramento*	FSC	Loose and sandy soil (relict dunes, disturbed sandy areas)		x
San Francisco lacewing	*Nothochrysa californica*	FSC	Uplands of San Francisco Bay Area.		x
San Joaquin dune beetle	*Coelus gracilis*	FSC	Relict dune habitat. Known from the Antioch Dunes. Not expected within Delta due to lack of suitable habitat.		x

Summary of Special Status Species in the Delta

Species			Description of Habitat	Species Potentially Impacted?	
Common Name	*Scientific Name*	Status		Yes	No
Valley elderberry longhorn beetle	*Desmocersus californicus dimorphus*	FT	Elderberry shrubs. Elderberry shrubs occur throughout Delta.	x	
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Vernal swales and pools. Potential habitat occurs in Delta.		x
Vernal pool tadpole shrimp	*Lepidurus packardi*	FE	Vernal swales and pools. Potential habitat occurs in Delta.		x
Yellow-banded andrenid bee	*Perdita hirticeps luteocincta*	FSC	Relict dune habitat. Known only from Antioch Dunes. Considered Extinct.		x
Fish					
Cen Val fall/late fall-run chinook crit. hab.	*Oncorhynchus tshawytscha critical habitat*	FE		x	
Cen. Val. fall/late fall-run chinook salmon	*Oncorhynchus tshawytscha*	FPT	Streams, estuary, tidal marsh, bay, ocean.	x	
Cen. Val. spring-run chinook crit. hab.	*Oncorhynchus tshawytscha critical habitat*	FE		x	
Cent. Val. spring-run chinook salmon	*Oncorhynchus tshawytscha*	ST, FPE	Stream, estuary, tidal marsh, bay, ocean.	x	
Cent. Val. steelhead	*Oncorhynchus mykiss*	FT	Stream, estuary, tidal marsh, bay, ocean.	x	
Delta smelt	*Hypomesus transpacificus*	ST, FT	Shallow, freshwater, tidally influenced rivers, sloughs.	x	
Delta smelt critical habitat	*Hypomesus transpacificus critical habitat*	FT		x	
Green sturgeon	*Acipenser medirostris*	FSC	Estuary, ocean.	x	
Kern brook lamprey	*Lampetra hubbsi*	FSC	Silty backwaters of large rivers in foothills.		x
Longfin smelt	*Spirinchus thaleichthys*	FSC	Estuary, bay.	x	
Pacific lamprey	*Lampetra tridentata*	FSC	Freshwater, estuarine with sandy bottom, ocean.	x	
River lamprey	*Lampetra ayresi*	FSC	Streams, sandy backwaters, stream edges.	x	
Sacramento splittail	*Pogonichthys macrolepidotus*	FT	Freshwater, estuarine, shallow seasonally flooded vegetation.	x	
Winter-run chinook salmon	*Oncorhynchus tshawytscha*	SE, FE	Streambanks, estuary, tidal marsh, bay, ocean.	x	
Winter-run chinook salmon crit. hab	*Oncorhynchus tshawytscha critical habitat*	FE		x	
Wildlife - Amphibians					
California red-legged frog	*Rana aurora draytonii*	FT	Freshwater marsh.	x	
California tiger salamander	*Ambystoma californiense*	FC1	Annual grasslands with vernal pools, seasonal wetlands, and permanent waterways of grasslands.		x
Foothill yellow-legged frog	*Rana boylii*	FSC	Near rocky streams in valley-foothill hardwood, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, wet meadow types.		x
Western spadefoot toad	*Scaphiopus hammondii*	FSC	Annual grassland with vernal pools and seasonal wetlands.		x

Summary of Special Status Species in the Delta

Species			Description of Habitat	Species Potentially Impacted?	
Common Name	*Scientific Name*	Status		Yes	No
Wildlife - Reptiles					
Alameda whipsnake	*Masticophis lateralis euryxanthus*	ST, FT	Valley and foothill grassland, oakwoodland, chaparral, and coastal scrub.		x
California horned lizard	*Phrynosoma contonatum frontale*	FSC	Valley foothill hardwood, conifer and riparian habitat.		x
Giant garter snake	*Thamnophis couchi gigas*	ST, FT	Freshwater emergent wetlands with adjacent grasslands.	x	
Northwestern pond turtle	*Clemmys marmorata marmorata*	FSC, SSSC, 2	Freshwater marsh and riparian forest and scrub.	x	
San Joaquin coachwhip (whipsnake)	*Masticophis flagellum ruddocki*	FSC	Open terrain: grass, desert, scrub, chaparral, and pasture habitats.		x
Silvery legless lizard	*Anniella pulchra pulchra*	FSC	Coastal dune, valley foothill chaparral and coastal scrub.		x
Southwestern pond turtle	*Clemmys marmorata pallida*	FSC, SSC, 2	Freshwater marsh and riparian forest and scrub.	x	
Wildlife - Birds					
Aleutian Canada goose	*Branta canadensis leucopareia*	FT	Central Valley croplands and grasslands during winter months. No project activities to occur during winter months.		x
American peregrine falcon	*Falco peregrinus anatum*	SE, FE, SP	Wetlands, woodlands, agricultural areas, cities and coastal during winter months. No project activities to occur during winter months.		x
Bald eagle	*Haliaeetus leucocephalus*	SE, FT	Uncommon winter migrant; large bodies of water or rivers.		x
Bank swallow	*Riparia riparia*	ST	Riverine and vertical cliffs or banks with sandy/loamy sediment.		x
Bell's sage sparrow	*Amphispiza belli belli*	SSC/FC2	Low, dense stands of shrubs, in transmontane California. In cismontane California, frequents chaparral dominated by chamise, and coastal scrub dominated by sage.		x
Black shouldered kite	*Elanus caeruleus*	CFP	Grasslands and croplands with adjacent scattered trees.		x
Burrowing owl	*Anthene cunicularia*	SSC	Annual grassland, cropland, and scrubland.		x
California black rail	*Laterallus jamaicensis coturniculus*	CFP, ST/FC2	Fresh/brackish/saltwater marsh.	x	
California brown pelican	*Pelecanus occidentalis californicus*	SE, FE	Estuarine , marine subtidal and marine pelagic waters along coast.		x
California clapper rail	*Rallus longisrostris obsoletus*	SE, FE	Coastal wetlands and brackish areas, saline emergent wetlands, freshwater marsh. Known from the San Pablo and Suisun Bays.		x
California least tern	*Sterna antillarium (albirfons) browni*	SE, FE	Nests in coastal strand and dune habitats. Forages over estuaries, bays or harbors. Known from San Pablo and Suisun Bays.		x
Cooper's hawk	*Accipter cooperi*	SSC	Woodlands near water.		x
Ferruginous hawk	*Buteo regalis*	FSC	Open lowlands with scattered trees.		x
Golden eagle	*Aquila chrysaetos*	CFP, SSC	Forages in various habitat, including grasslands and early stages of forests and shrub habitats, rolling hills and mountain terrain.		x

Summary of Special Status Species in the Delta

Species			Description of Habitat	Species Potentially Impacted?	
Common Name	*Scientific Name*	Status		Yes	No
Great blue heron	*Ardea herodias*	***	Tall eucalyptus or riparian forest. Occur throughout Delta .	x	
Great sandhill crane	*Grus canadensis tabida*	CFP, ST	Winter habitats include annual and perennial grassland, grasslands, moist croplands with corn or rice stubble and open emergent wetland	x	
Mountain plover	*Charadrius montanus*	FPT	Grasslands and plowed fields.		x
Northern harrier	*Circus cyaneus*	SSC	Meadows, grasslands, emergent wetlands, and open areas.		x
Saltmarsh common yellowthroat	*Geothlypis trichas sinuosa*	SSC/FSC	Salt marsh emergent wetlands.		x
San Pablo song sparrow	*Melospiza melodia samuelis*	SSC/FC2	Tida salt marshes. Occurs at San Pablo Bay.		x
Sharp-shinned hawk	*Accipter striatus*	SSC	Riparian and coniferious forests adjacent to open areas.		x
Short-eared owl	*Asio flammeus*	SSC	Open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, saline, and fresh emergent wetlands.	x	
Suisun song sparrow	*Melospiza melodia maxillaris*	FSC	Brackish emergent wetlands.		x
Swainson's hawk	*Buteo swainsoni*	ST	Nesting in ripariqan forest and/or scattered trees. Foraging in irrigating cropland and non-native grassland. Occurs in Delta.		x
Tricolored blackbird	*Agelaius tricolor*	FSC	Freshwater marsh, especially cattails.	x	
Western burrowing owl	*Athene cunciularia hypugea*	FSC, SSSC	Grasslands and agricultural areas with ground squirrel burrows.		x
Western snowy plover	*Charadrius alexandrinus nivosus*	FT	Salt-influenced habitats with sandy shores.		x
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	SE	Extensive riparian forests with dense underbrush and orchards.		x
White-faced ibis	*Plegadis chihi*	FSC, SSSC	Freshwater emergent wetland, shallow lacustrine water, muddy grounds of wet meadows and irrigated or flooded pastures and croplands. Habitat occurs in Delta.	x	
Wildlife - Mammals					
Fringed myotis bat	*Myotis thysandodes*	FSC	Hot desert scrubland, grassland, xeric woodland, sage-grass steppe, mesic old-growth forest, and multi-age subalpine coniferous and mixed-deciduous forest.		x
Greater western mastiff-bat	*Eumops perotis californicus*	FSC	Open semi-arid to arid habitats, including woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub and urban		x
Long-eared myotis bat	*Myotis evotis*	FSC	Brush, woodland and forest habitats.		x
Long-legged myotis bat	*Myotis volans*	FSC	Woodlands and forest habitat above 1200 m.		x

Summary of Special Status Species in the Delta

Species			Description of Habitat	Species Potentially Impacted?	
Common Name	*Scientific Name*	Status		Yes	No
Pacific western big-eared bat	*Corynorhinus (Plecotus) townsendii townsendii*	FSC	Coastal conifer forest to arid grasslands and desert.		x
Pallid bat	*Antrozous pallidus*	SSC	Inhabits grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. Most common in open, dry habitats with rocky areas for roosting.		x
Riparian brush rabbit	*Sylvilagus bachmani riparius*	SE, FPE	Riparian scrub. Occurs along the banks of the San Joaquin River, in southern San Joaquin County.		x
Riparian woodrat (SJV)	*Neotoma fuscipes riparia*	FPE	Chaparral, oak and riparian woodland, mixed coniferous forest.		x
Salt marsh harvest mouse	*Reithrodontomys raviventris*	SE, FE	Pickleweed saline emergent wetland. Occurs in marshes bordering San Francisco, San Pablo and Suisun Bays.		x
Salt marsh wandering shrew	*Sorex vagrans halicoetes*	SSC	Tidal saltmarshes. Known from San Pablo and Suisun Bays		x
San Francisco dusky-footed woodrat	*Neotoma fuscipes annectens*	FSC	Forest habitats of moderate canopy and moderate to dense understory.		x
San Joaquin kit fox	*Vulpes macrotis muntica*	ST, FE	Annual grassland with associated scrub vegetation. Occurs west of Clifton Court Forebay. Not expected within the Delta.		x
San Joaquin pocket mouse	*Perognathus inornatus*	FSC	Grassland, blue oak savannahs, coastal crub chaparral, and riparian woodland. Occurs in Delta.		x
Small-footed myotis bat	*Myotis ciliolabrum*	FSC	Arid wooded and brushy uplands near water. Forages over water, requires more water than other bats.	x	
Suisun ornate shrew	*Sorex ornatus sinuosus*	FSC	Tidal salt and brackish marshes. Known from San Pablo and Suisun Bays.		x
Yuma myotis bat	*Myotis yumanensis*	FSC	Riparian, arid scrublands and deserts, open forests and woodlands. Feeds on aquatic emergent insects.	x	

Appendix S

Herbicide Handling Procedures and Spill Contingency Plan

Handling Procedures

When handled and used as directed, herbicides used in the EDCP would have little potential to cause environmental concerns or personal injury should a spill occur. All personnel involved with the application of EDCP herbicides would be trained in herbicide handling in accordance with the Food and Agriculture Code and Title 3 Code of Regulations pertaining to Pesticides and Pest Control Operations. This training would provide EDCP operations personnel with sufficient information regarding the toxicity, product labels, material safety data sheets (MSDS), spill contingency plan, first aid procedures, and proper clothing and eye protection.

The person in charge of the application would have a cellular phone in possession and the telephone numbers of the California Department of Fish and Game Pesticide Investigations Unit, County Agricultural Commissioner's, California Regional Water Quality Control Board, State Office of Emergency Services, County Health Department, the California Highway Patrol, County Sheriff's Office, and the Chemtrec Hotline.

All pesticide spills would be treated as emergencies. Concentrated pesticide spills are more dangerous than pesticides diluted with water, and would be treated seriously and immediately. While spills can occur during transporting, storing, or while using pesticides, the DBW would apply the following preventive measures to reduce the potential for a serious spill:

- For boats - herbicides will be securely fastened to floats in their original, watertight containers.
- For vehicles - herbicides will be transported in their original, watertight containers, in a manner that will prevent spillage onto the vehicle or off the vehicle.
- Only herbicide containers being used at the time of application will be open.

Storage

All EDCP herbicides would be stored in a secured warehouse in accordance with the California Food and Agriculture Code and Title 3 Code of Regulations.

Transport

Herbicides would be delivered by truck or boat to specific treatment sites on the day of treatment. They would be transported in their original, unopened, watertight containers, securely fastened to the truck or boat, in a manner that would prevent spillage onto or off of the vehicle or vessel.

Mixing, Loading and Applications

All mixing operations would be conducted on boats within the target site. All mixing, loading, and application operations would be performed by a licensed pesticide applicator. Only the herbicide containers being used would be opened at the application site.

Spill Contingency Plan

Reporting Spills

Herbicide spills of over 20 gallons would be immediately reported to the agencies on the "Spillage-Emergency Numbers" list by the person in charge of the application (County agencies would be limited to the County where the spill occurred).

For spills under 20 gallons, not on public roadways, that do not pose a serious threat to the public or the environment, reporting would be made at the earliest convenience and would be restricted to the County Agricultural Commissioner's of the appropriate Counties.

Spills on Land

If a spill occurs on a public roadway, the California Highway Patrol, the California Office of Emergency Services and the County Agricultural Commissioner would immediately be notified.

In the event a spill occurs, it is of paramount importance that the discharge be stopped at its source and that the spilled material be contained. DBW personnel would have access to supersorb or common cat litter that would

be used for immediate containment of the spilled material. The following actions would be taken as necessary to contain a spill on ground:

- Stopping the spill at its source
- Diking in pools as appropriate
- Using materials such as soil, supersorb, or cat litter to absorb pooled material.

Contaminated soil or absorbent material would then be placed in a sealable disposable container suitable for transporting. The container would be labeled with its contents, including herbicide name and signal word. It would then be disposed of in accordance with the label and all applicable laws and regulations.

Spills in Water

If a spill occurs in the water, the Office of Emergency Services and the County Agricultural Commissioner would immediately be notified. The Office of Emergency Services would take charge of coordinating the cleanup and protecting the public.

In the event of a spill in water the following procedures would be employed:

- The location of the spill would be marked.
- The Aquatic Pest Control Supervisor would be notified.
- The amount of herbicide spilled would be assessed.
- The Office of Emergency Services would be notified.
- The county Agricultural Commissioners Office would be notified.
- All appropriate agencies on the emergency spill list would be notified.
- If needed, a monitoring plan would be developed.

The spill location would be marked with a marker buoy and an approximate bearing would be established with any permanent land markers. An inspection of the spill location would be performed by DBW personnel and the Office of Emergency Services (OES) to determine the amount of herbicide spilled and the potential environmental impacts. If deemed necessary the area would be monitored for herbicide residues and environmental impacts.

Disposal of Herbicide Containers

Empty herbicide containers would be rinsed on site, rendered unusable and recycled according to Food and Agriculture Code.

Conclusion

All herbicides proposed for the EDCP are registered by the Federal Environmental Protection Agency and the California Department of Pesticide Regulation. All herbicides used are aquatic herbicides intended for use in aquatic environments. Herbicide containers would be transported in their original unopened containers securely fastened to floats to make them easily retrievable in the event of an accident. They would be disposed of according to the Food and Agricultural Code. Spills would immediately be reported to appropriate agencies.